

KSD362

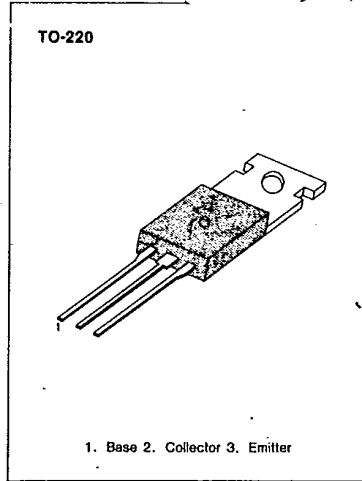
NPN EPITAXIAL SILICON TRANSISTOR

B/W TV HORIZONTAL DEFLECTION OUTPUT

- Collector-Base Voltage $V_{CBO} = 150V$
- Collector Current $I_C = 5A$
- Collector Dissipation $P_C = 40W$ ($T_C = 25^\circ C$)

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	150	V
Collector-Emitter Voltage	V_{CEO}	70	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	5	A
Collector Dissipation ($T_C = 25^\circ C$)	P_C	40	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ C$



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ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 1mA, I_E = 0$	150			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 20mA, R_{BE} = \infty$	70			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 1mA, I_C = 0$	8			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 100V, I_E = 0$			20	μA
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 5A$	20		140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 0.5A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 0.5A$			1.5	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5V, I_C = 0.5A$		10		MHz

h_{FE} CLASSIFICATION

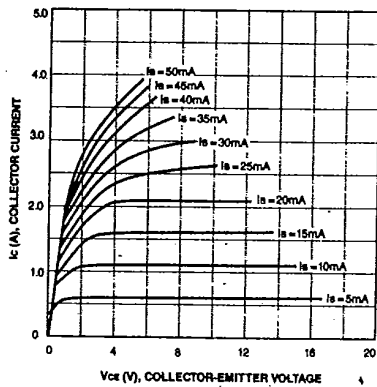
Classification	N	R	O
h_{FE}	20-50	40-80	70-140

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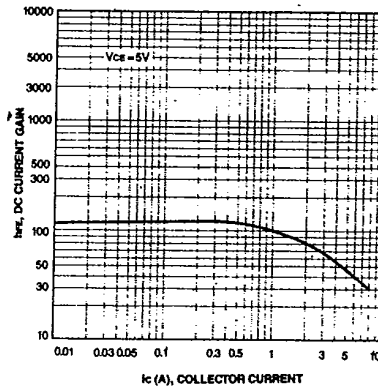
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

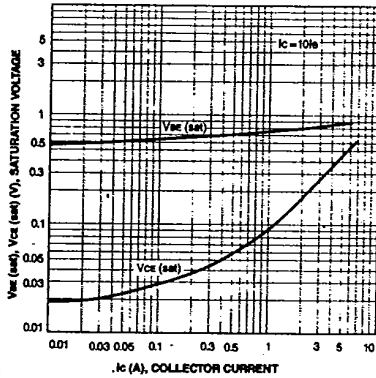
STATIC CHARACTERISTIC



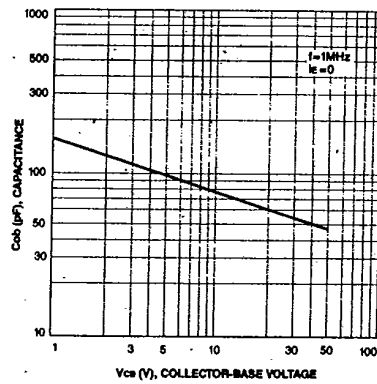
DC CURRENT GAIN



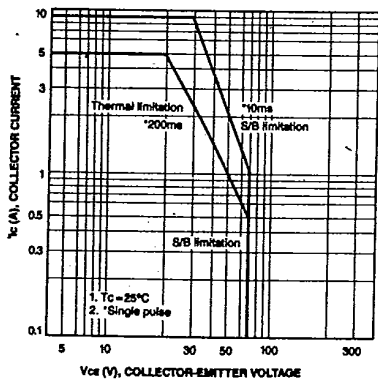
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



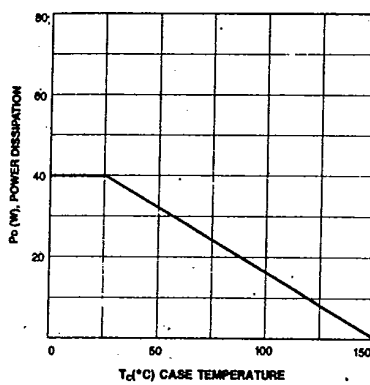
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA



POWER DERATING

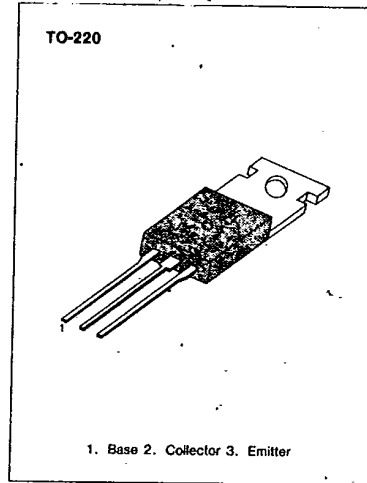


KSD363**NPN EPITAXIAL SILICON TRANSISTOR****B/W TV HORIZONTAL DEFLECTION OUTPUT**

- Collector-Base Voltage $V_{CB0}=300V$
- Collector Current $I_C=6A$
- Collector Dissipation $P_C=40W$ ($T_C=25^\circ C$)

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ C$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	300	V
Collector-Emitter Voltage	V_{CE0}	120	V
Emitter-Base Voltage	V_{EB0}	8	V
Collector Current	I_C	6	A
Collector Dissipation ($T_C=25^\circ C$)	P_C	40	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ C$



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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=1mA, I_E=0$	300			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C=20mA, I_B=0$	120			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=-1mA, I_C=0$	8			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=250V, I_E=0$			1	mA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1A$	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.1A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.1A$			1.5	V
Current Gain-Band width Product	f_T	$V_{CE}=5V, I_C=0.5A$		10		MHz

 h_{FE} CLASSIFICATION

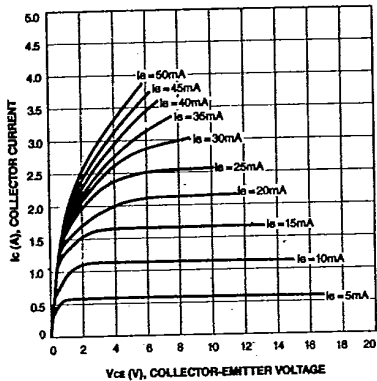
Classification	R	O	Y
h_{FE}	40-80	70-140	120-240

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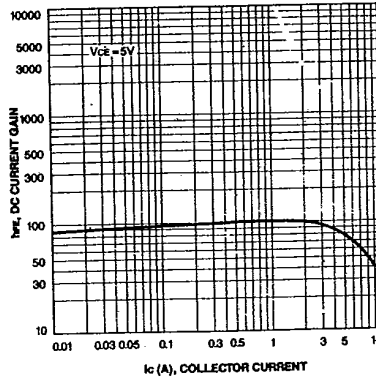
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

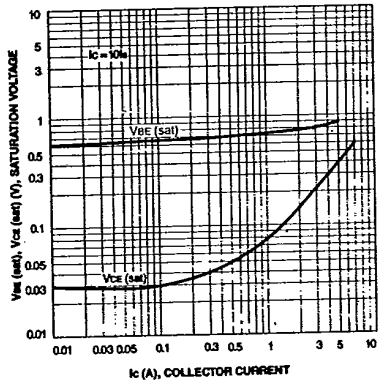
STATIC CHARACTERISTIC



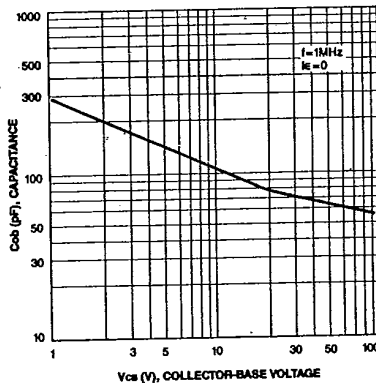
DC CURRENT GAIN



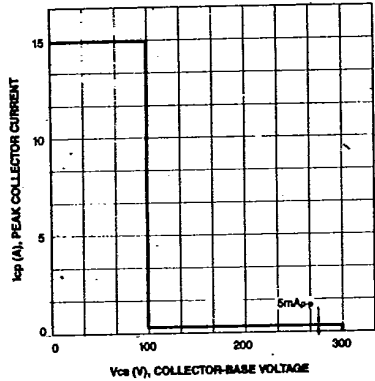
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



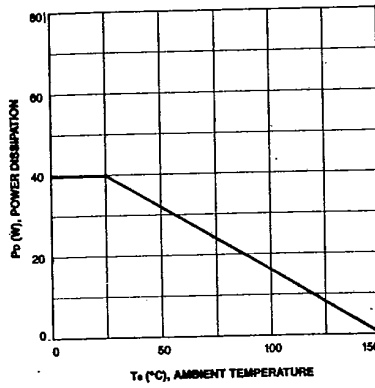
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA
(On HORIZONTAL DEFLECTION OUTPUT CIRCUIT)



POWER DERATING



KSD526**NPN EPITAXIAL SILICON TRANSISTOR**

T-33-09

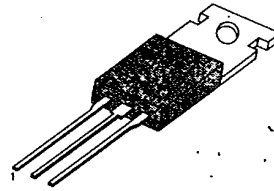
POWER AMPLIFIER APPLICATIONS

- Complement to KSB596

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	80	V
Collector-Emitter Voltage	V_{CE0}	80	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	4	A
Base Current	I_B	0.4	A
Collector Dissipation ($T_c=25^\circ\text{C}$)	P_C	30	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$

TO-220



1. Base 2. Collector 3. Emitter

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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{C0}	$V_{CB}=80\text{V}, I_E=0$			30	μA
Emitter Cutoff Current	I_{E0}	$V_{EB}=5\text{V}, I_C=0$			100	μA
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=50\text{mA}, I_B=0$	80			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=10\text{mA}, I_C=0$	5			V
DC Current Gain	h_{FE1}	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	40		240	
	h_{FE2}	$V_{CE}=5\text{V}, I_C=3\text{A}$	15	50		
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C=3\text{A}, I_B=0.3\text{A}$		0.45	1.5	V
Base Emitter On Voltage	$V_{BE}(\text{on})$	$V_{CE}=5\text{V}, I_C=3\text{A}$		1	1.5	V
Current Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	3	8		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		90		pF

 $h_{FE}(1)$ CLASSIFICATION

Classification	R	O	Y
$h_{FE}(1)$	40-80	70-140	120-240

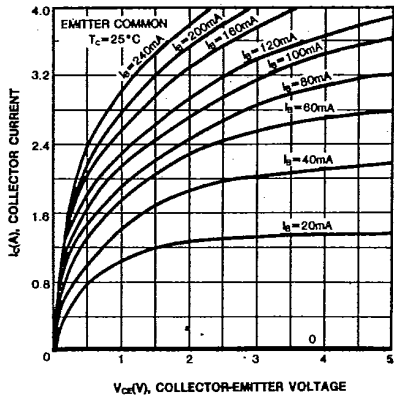


KSD526

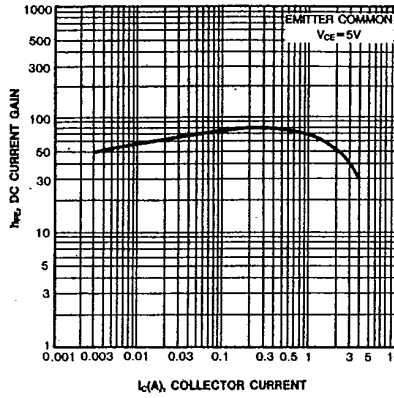
NPN EPITAXIAL SILICON TRANSISTOR

T-33-09

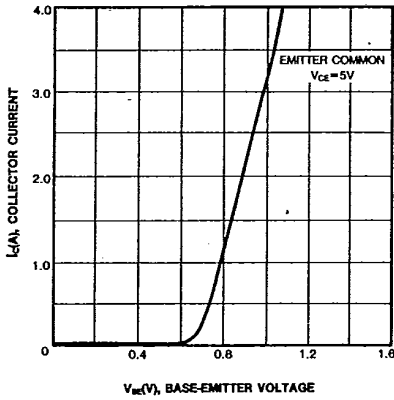
STATIC CHARACTERISTIC



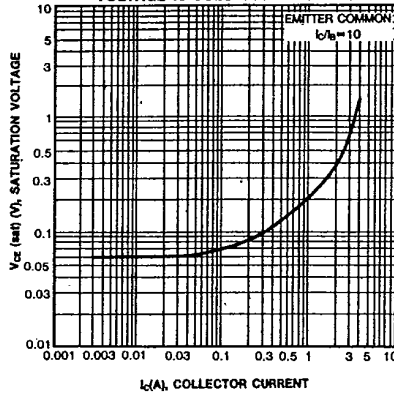
DC CURRENT GAIN



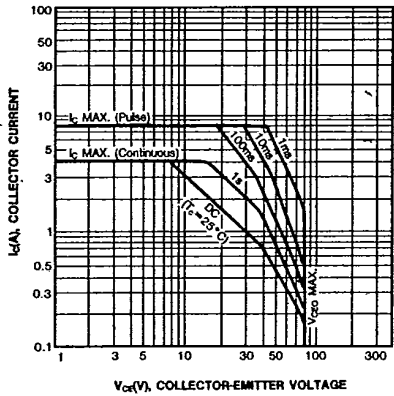
BASE-EMITTER ON VOLTAGE



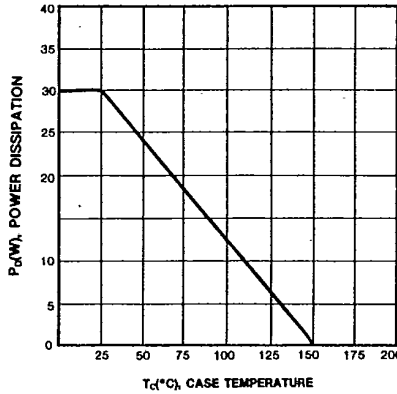
COLLECTOR-EMITTER SATURATION VOLTAGE vs COLLECTOR CURRENT



SAFE OPERATING AREA



POWER DERATING



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