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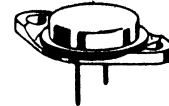
HIGH VOLTAGE-HIGH-POWER SILICON TRANSISTORS

... designed for use in high power audio amplifier applications and high-voltage switching regulator circuits.

- High Collector-Emitter Sustaining Voltage –
 $V_{CE(sus)} = 100 \text{ Vdc (Min) – 2N5632, 2N6229}$
 $= 120 \text{ Vdc (Min) – 2N5633, 2N6230}$
 $= 140 \text{ Vdc (Min) – 2N5634, 2N6231}$
- High DC Current Gain @ $I_C = 5.0 \text{ Adc}$ –
 $h_{FE} = 25 \text{ (Min) – 2N5632, 2N6229}$
 $= 20 \text{ (Min) – 2N5633, 2N6230}$
 $= 15 \text{ (Min) – 2N5634, 2N6231}$
- Low Collector-Emitter Saturation Voltage –
 $V_{CE(sat)} = 1.0 \text{ Vdc (Max) @ } I_C = 7.5 \text{ Adc}$

10 AMPERE
 COMPLEMENTARY SILICON
 POWER TRANSISTORS

100-120-140 VOLTS
 150 WATTS



*MAXIMUM RATINGS

Rating	Symbol	2N5632 2N6229	2N5633 2N6230	2N5634 2N6231	Unit
Collector-Emitter Voltage	V_{CE}	100	120	140	Vdc
Collector-Base Voltage	V_{CB}	100	120	140	Vdc
Emitter-Base Voltage	V_{EB}	← 7.0 →			Vdc
Collector Current – Continuous	I_C	← 10 →			Adc
– Peak		← 15 →			
Base Current – Continuous	I_B	← 5.0 →			Ade
Total Device Dissipation @ $T_C = 25^\circ\text{C}$	P_D	← 150 →			Watts
Derate above 25°C		← 0.857 →			W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	← -35 to +200 →			$^\circ\text{C}$

*THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	1.17	$^\circ\text{C/W}$

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Sustaining Voltage ⁽¹⁾ ($I_C = 200 \text{ mAdc}, I_B = 0$)	$V_{CE(sus)}$	100 120 140	– – –	Vdc
Collector-Emitter Cutoff Current ($V_{CE} = 50 \text{ Vdc}, I_B = 0$) ($V_{CE} = 60 \text{ Vdc}, I_B = 0$) ($V_{CE} = 70 \text{ Vdc}, I_B = 0$)	I_{CEO}	– – –	1.0 1.0 1.0	mAdc
Collector-Emitter Cutoff Current ($V_{CE} = \text{Rated } V_{CB}, V_{EB(off)} = 1.5 \text{ Vdc}$) ($V_{CE} = \text{Rated } V_{CB}, V_{EB(off)} = 1.5 \text{ Vdc}, T_C = 150^\circ\text{C}$)	I_{CEX}	–	1.0 5.0	mAdc
Collector-Base Cutoff Current ($V_{CB} = \text{Rated } V_{CB}, I_E = 0$)	I_{CBO}	–	1.0	mAdc
Emitter-Base Cutoff Current ($V_{BE} = 7.0 \text{ Vdc}, I_C = 0$)	I_{EBO}	–	1.0	mAdc

ON CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
DC Current Gain ⁽¹⁾ ($I_C = 5.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$) ($I_C = 10 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)	h_{FE}	25 20 15 5.0	100 80 60 –	
Collector-Emitter Saturation Voltage ($I_C = 7.5 \text{ Adc}, I_B = 0.75 \text{ Adc}$) ($I_C = 10 \text{ Adc}, I_B = 2.0 \text{ Adc}$)	$V_{CE(sat)}$	–	1.0 2.0	Vdc
Base-Emitter Saturation Voltage ($I_C = 7.5 \text{ Adc}, I_B = 0.75 \text{ Adc}$)	$V_{BE(sat)}$	–	2.0	Vdc
Base-Emitter On Voltage ($I_C = 5.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)	$V_{BE(on)}$	–	1.5	Vdc

DYNAMIC CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Current-Gain-Bandwidth Product ⁽²⁾ ($I_C = 1.0 \text{ Adc}, V_{CE} = 20 \text{ Vdc}, f_{test} = 0.5 \text{ MHz}$)	f_T	1.0	–	MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 0.1 \text{ MHz}$)	C_{ob}	–	300 600	pF
Small Signal Current Gain ($V_{CE} = 10 \text{ Vdc}, I_C = 2.0 \text{ Adc}, f = 1.0 \text{ kHz}$)	h_{fe}	15	–	