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POWER TRANSISTORS
2N6258

NPN SILICON POWER TRANSISTORS

HIGH POWER

30 AMPERES

FEATURES

LOW SATURATION VOLTAGE
HIGH COLLECTOR CURRENT RATING

APPLICATIONS

POWER SWITCHING CIRCUITS
AUDIO AMPLIFIERS, SERIES AND SHUNT REGULATORS
DC TO DC CONVERTERS AND INVERTERS

TO-3

ABSOLUTE MAXIMUM RATINGS

		2N6258
V_{CBO}	COLLECTOR-BASE VOLTAGE	100 V
V_{CEO}	COLLECTOR-EMITTER VOLTAGE	80 V
V_{EBO}	EMITTER-BASE VOLTAGE	7 V
I_C	CONTINUOUS COLLECTOR CURRENT	30 A
$I_{C(PK)}$	PEAK COLLECTOR CURRENT	30 A
I_B	CONTINUOUS BASE CURRENT	7.5 A
$I_{B(PK)}$	PEAK BASE CURRENT	15 A
T_J	OPERATING JUNCTION TEMPERATURE	-65°C to +200°C
T_{stg}	STORAGE TEMPERATURE	-65°C to +200°C
$R_{\theta JC}$	THERMAL RESISTANCE, JUNCTION TO CASE	0.7°C/W
P_D	POWER DISSIPATION (25°C)	250 W

6-83-349

POWER TRANSISTORS
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ELECTRICAL CHARACTERISTICS (T_C = 25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	MIN.	MAX.	UNITS
COLLECTOR-EMITTER SUSTAINING VOLTAGE * (I_C = 200mA)	$V_{CEO(sus)}$	80		V
COLLECTOR-EMITTER SUSTAINING VOLTAGE(1) (I_C = 200mA, R = 100Ω)	$V_{CER(sus)}$	85		V
COLLECTOR-EMITTER SUSTAINING VOLTAGE(1) (I_C = 200mA, V_{BE} = −1.5V)	$V_{CEX(sus)}$	90		V
COLLECTOR-BASE CUTOFF CURRENT(1) (V_{CB} = 100V)	I_{CBO}		1.0	mA
COLLECTOR-EMITTER CUTOFF CURRENT (V_{CB} = 100V, V_{BE} = −1.5V) (V_{CB} = 100V, V_{BE} = −1.5V, T_C = 150°C)	I_{CEX}		1.0 10	mA mA
COLLECTOR-EMITTER CUTOFF CURRENT (V_{CE} = 60V)	I_{CEO}		2.0	mA
EMITTER-BASE CUTOFF CURRENT (V_{EB} = 7V)	I_{EBO}		2.0	mA
DC CURRENT GAIN * (V_{CE} = 4V, I_C = 30A) (V_{CE} = 2V, I_C = 15A)	h_{FE}	5.0 20	60	
COLLECTOR-EMITTER SATURATION VOLTAGE * (I_C = 30A, I_B = 6A) (I_C = 15A, I_B = 1.5A)	$V_{CE(sat)}$		3.0 0.75	V V
BASE EMITTER VOLTGAE * (V_{CE} = 4V, I_C = 30A)	V_{BE}		3.5	V
SECONDARY BREAKDOWN CURRENT(1) (V_{CE} = 80V)	$I_{S/B}$	3.1		A
SECONDARY BREAKDOWN ENERGY(1) (L = 40mH, R_{BE} = 100, V_{BE} = −1.5, I_C = 5A)	$E_{S/B}$	500		mj
MAGNITUDE SMALL SIGNAL GAIN (V_{CE} = 4V, I_C = 1A, f = 0.05MHz)	$\|h_{fe}\|$	8		
SMALL SIGNAL GAIN (V_{CE} = 4V, I_C = 1A, f = 1KHz	h_{fe}	40		

* PULSED 330 μsec: 2% DUTY CYCLE