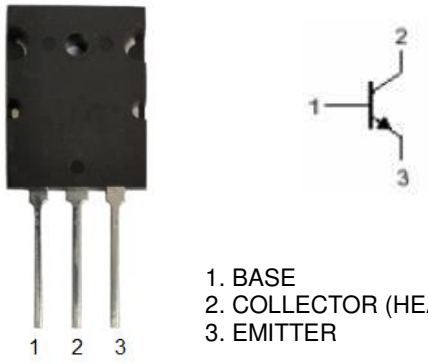
MOSPEC

2SC5200

Silicon NPN Power Transistors

DESCRIPTION
- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 230V(Min)
- Complement to Type 2SA1943

APPLICATIONS
- Power amplifier applications
- Recommend for 100W high fidelity audio frequency amplifier output stage applications



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

simplified outline (TO-3PL) and symbol

MAXIMUM RATINGS

Characteristic	Symbol	2SC5200	Unit
Collector-Base Voltage	V_{CBO}	230	V
Collector-Emitter Voltage	V_{CEO}	230	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	15	A
Base current	I_B	1.5	A
Collector power dissipation @ T_C=25℃	P_C	150	W
Junction Temperature	$T_{j,}$	150	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

ELECTRICAL CHARATERISTICS (T_C=25℃ unless otherwise notes)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (I_C = 50 mA , I_B =0)	V_{CEO}	230			V
Collector Cutoff Current (V_{CB} = 230 V , I_E =0V)	I_{CBO}			5	uA
Emitter Cutoff Current (V_{EB} = 5.0 V , Ic =0)	I_{EB0}			5	uA
DC Current Gain (I_C = 1.0 A , V_{CE} =5.0 V)	$h_{FE(1)}$ (Note)	55		160	
DC Current Gain (I_C = 7.0 A , V_{CE} =5.0 V)	$h_{FE(2)}$	35			
Collector-Emitter Saturation Voltage (I_C = 8.0 A , I_B =0.8 A)	$V_{CE(SAT)}$			3.0	V
Base-Emitter On Voltage (I_C = 7.0 A , V_{CE} =5.0 V)	$V_{BE(ON)}$			1.5	V
Output Capacitance (I_E=0 , V_{CB}= 10V , f = 1.0MHz)	C_{OB}		200		pF
Current-Gain—Bandwidth Product (I_C= 1A ; V_{CE}= 5V)	f_T		30		MHz

Note：$h_{FE(1)}$ Classifications R：55~110， O：80~160

FIG-1 I_C-V_{CE} CHARACTERISTICS

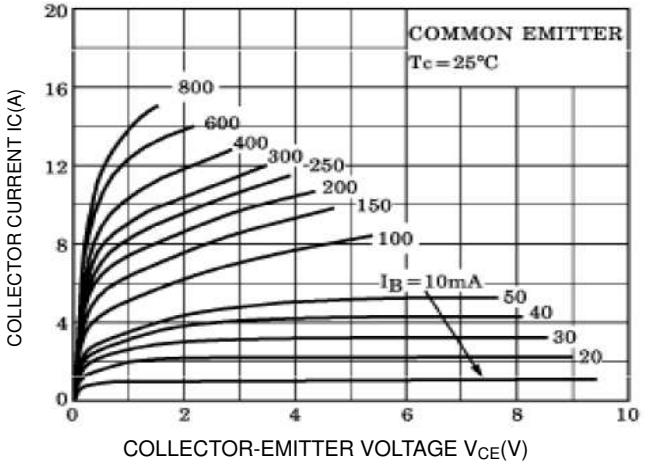


FIG-2 I_C-V_{BE} CHARACTERISTICS

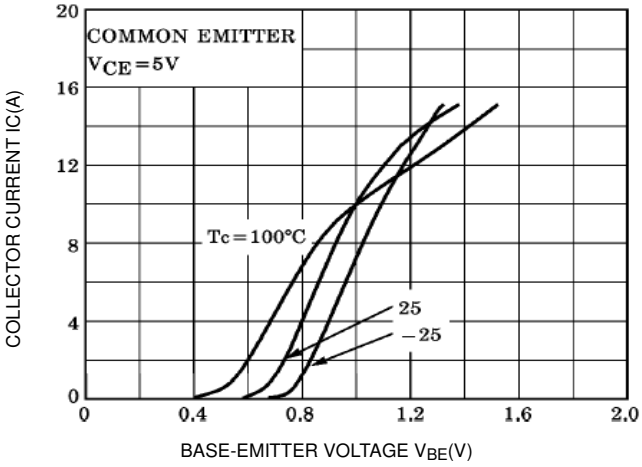


FIG-3 $V_{CE(SAT)}$-I_C CHARACTERISTICS

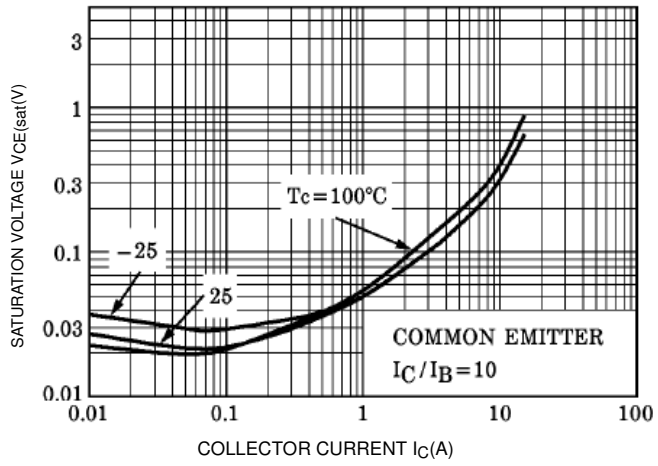


FIG-4 Hfe-I_C CHARACTERISTICS

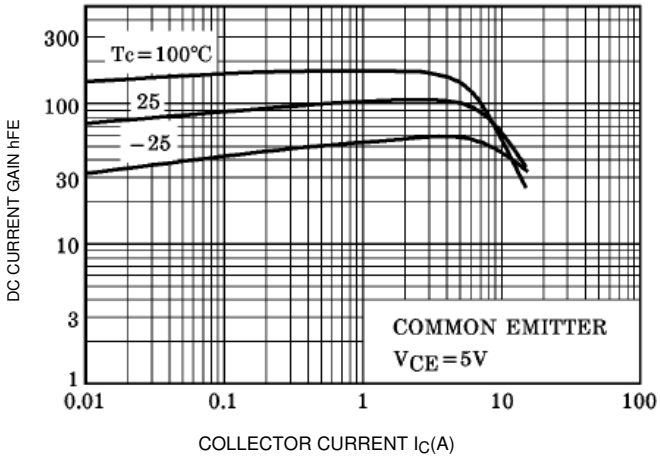
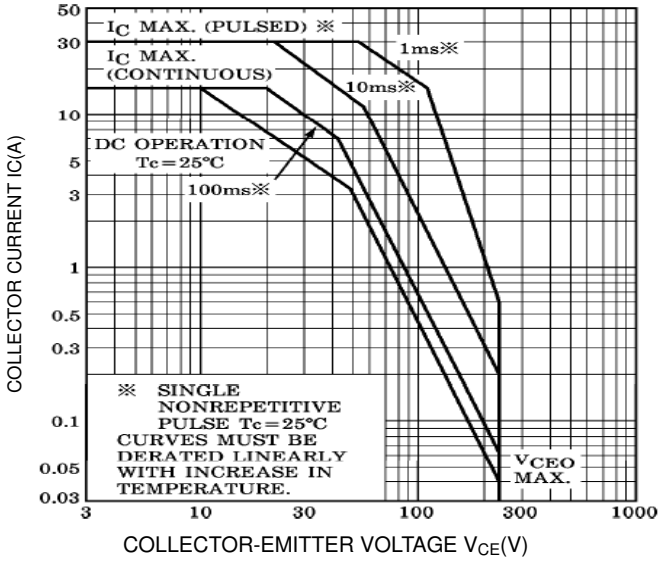
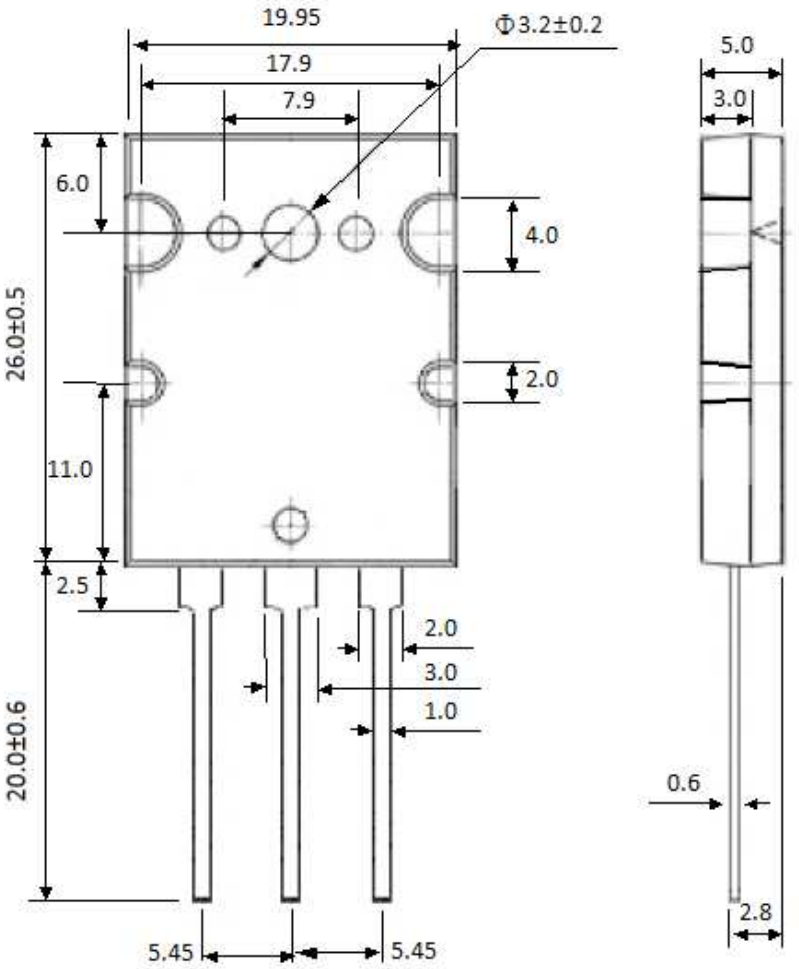


FIG-5 SAFE OPERATING AREA



PACKAGE OUTLINE DIMENSIONS (Unit in mm)

TO-3PL



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