

HIGH-POWER NPN SILICON POWER TRANSISTORS

...designed for use in general-purpose amplifier and switching application .

FEATURES:

- * Recommend for 150W High Fidelity Audio Frequency Amplifier Output stage
- * Complementary to 2SA1216

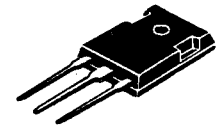
NPN
2SC2922

17 AMPERE
POWER
TRANSISTOR

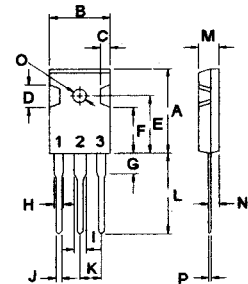
180 VOLTS
200 WATTS

MAXIMUM RATINGS

Characteristic	Symbol	2SC2922	Unit
Collector-Emitter Voltage	V_{CEO}	180	V
Collector-Base Voltage	V_{CBO}	180	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	17 20	A
Base current	I_B	5.0	A
Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	200 1.6	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$



TO-247(3P)



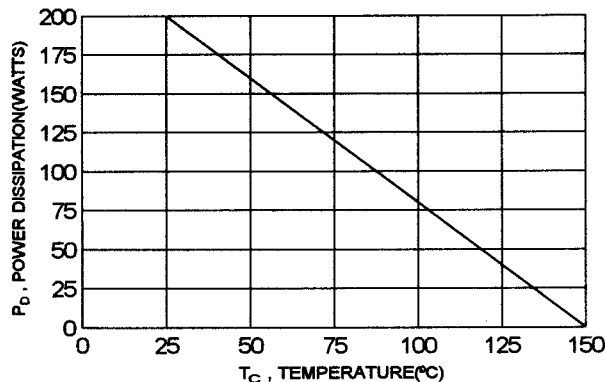
PIN 1.BASE
2.COLLECTOR
3.EMITTER

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	R^{θ}_{jc}	0.625	$^\circ C/W$

DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

FIGURE -1 POWER DERATING



ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 25\text{ mA}$, $I_B = 0$)	$V_{(BR)CEO}$	180		V
Collector Cutoff Current ($V_{CB} = 180\text{ V}$, $I_E = 0$)	I_{CBO}		100	μA
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_C = 0$)	I_{EBO}		100	μA

ON CHARACTERISTICS (1)

DC Current Gain ($I_C = 8.0\text{ A}$, $V_{CE} = 4.0\text{ V}$)	hFE	20		
Collector-Emitter Saturation Voltage ($I_C = 8.0\text{ A}$, $I_B = 800\text{ mA}$)	$V_{CE(sat)}$		2.0	V

DYNAMIC CHARACTERISTICS

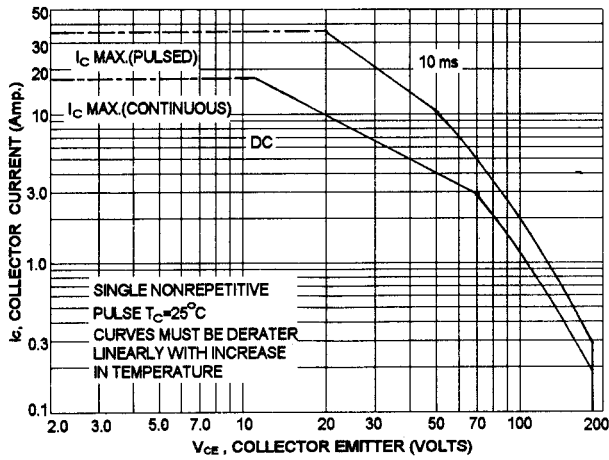
Current-Gain-Bandwidth Product ($I_C = 2.0\text{ A}$, $V_{CE} = 12\text{ V}$, $f = 1.0\text{ MHz}$)	f_T	10		MHz
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SWITCHING CHARACTERISTICS

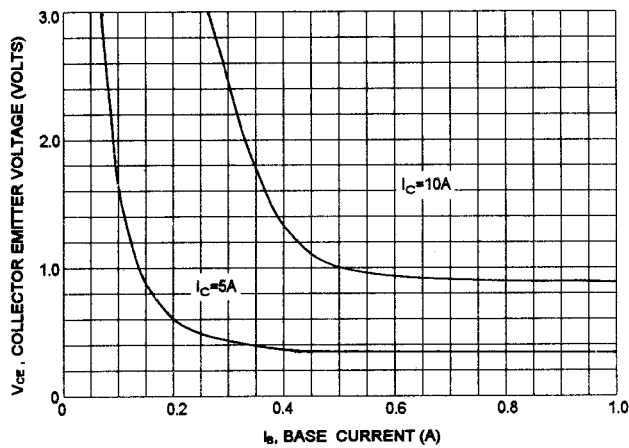
Turn-on Time	$V_{CC} = 40\text{ V}$, $I_C = 10\text{ A}$ $I_{B1} = -I_{B2} = 1.0\text{ A}$ $R_L = 4\text{ ohm}$	t_{on}	0.30(typ)		μs
Storage Time		t_s	2.20(typ)		μs
Fall Time		t_f	0.45(typ)		μs

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

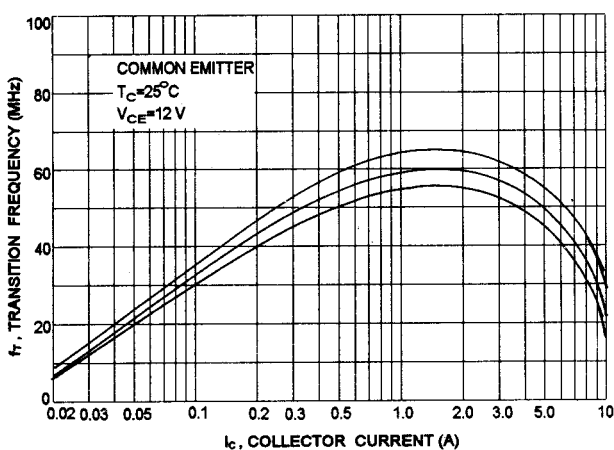
ACTIVE-REGION SAFE OPERATING AREA (SOA)



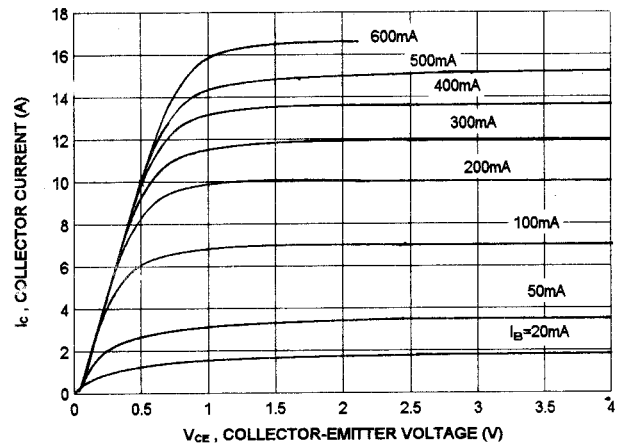
$V_{CE}(\text{sat}) - I_B$



$f_T - I_C$



$I_C - V_{CE}$



DC CURRENT GAIN

