MOSPEC

PNP SILICON POWER TRANSISTORS

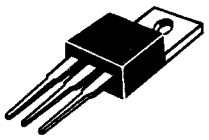
SJE1497 transistor is designed for use in general purpose Power amplifier,vertical output application

FEATURES:
* Collector-Emitter Voltage
  V_{CEO}= 150V(Min)
* DC Current Gain
  hFE= 30(Min)@I_C= 300mA

PNP

SJE1497

1.5 AMPERE
POWER
TRANASISTORS
150 VOLTS
25 WATTS



TO-220

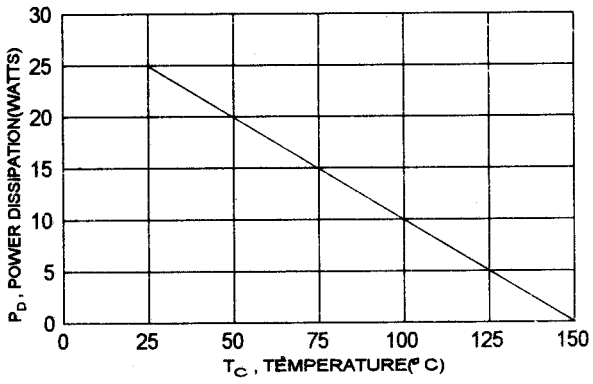
MAXIMUM RATINGS

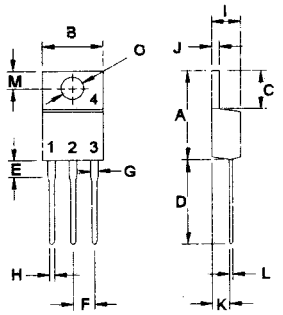
Characteristic	Symbol	SJE1497	Unit
Collector-Emitter Voltage	V_{CEO}	150	V
Collector-Base Voltage	V_{CBO}	200	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	1.5 3.0	A
Total Power Dissipation @T_C = 25°C Derate above 25°C	P_D	25 0.2	W W/°C
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	Rθjc	5.0	°C/W

FIGURE -1 POWER DERATING





PIN 1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.31
B	9.78	10.42
C	5.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	3.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Base Voltage (I_C= 100 uA, I_B= 0)	V_{CBO}	200		V
Collector-Emitter Voltage (I_C= 30 mA, I_B= 0)	V_{CEO}	150		V
Emitter-Base Voltage (I_B= 1.0 mA, I_C= 0)	V_{EBO}	6.0		V
Collector Cutoff Current (V_{CB}= 120 V, I_E= 0)	I_{CBO}		10	uA
Emitter Cutoff Current (V_{EB}= 4.0 V, I_C= 0)	I_{EBO}		10	uA
ON CHARACTERISTICS (1)				
DC Current Gain (I_C= 0.3 A, V_{CE}= 5.0 V)	hFE	30		
Collector-Emitter Saturation Voltage (I_C= 1.0 A, I_B= 200 mA)	$V_{CE(sat)}$		1.0	V
Base-Emitter On Voltage (I_C= 1.0 A, V_{CE}=10 V)	$V_{BE(on)}$		1.5	V
SWITCHING CHARATERISTICS				
Turn-on Time	V_{CC}= 50 V, I_C= 0.5A	t_{on}		0.5 us
Storage Time	I_{B1}= -I_{B2}= 50 mA PW= 20 us	t_s		1.0 us
Fall Time		t_f		0.5 us

(1) Pulse Test: Pulse Width =300 us,Duty Cycle ≦ 2.0%

FIG-2 Ic - Vce

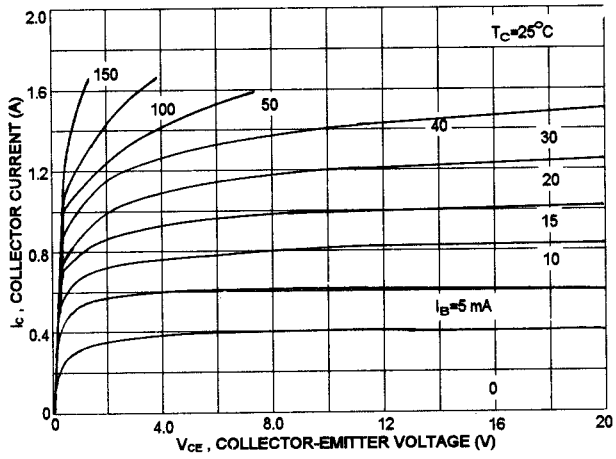


FIG-3 SAFE OPERATING AREA

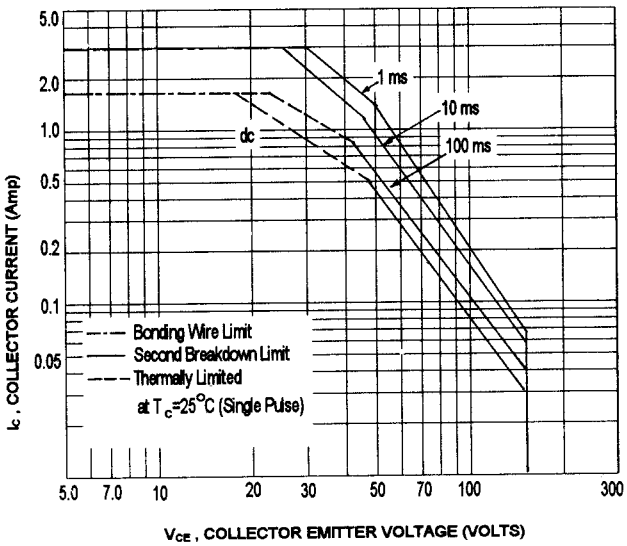
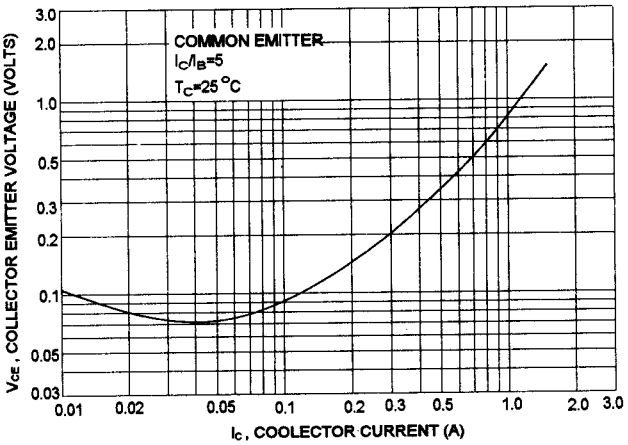


FIG-4 VCE(sat) - Ic



There are two limitation on the power handling ability of a transistor:average junction temperature and second breakdown safe operating area curves indicate I_C-V_{CE} limits of the transistor that must be observed for reliable operation i.e., the transistor must not be subjected to greater dissipation than curves indicate.

The data of FIG-3 is base on $T_{J(PK)}$=150 °C;T_C is variable depending on conditions. second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(PK)}\leq$150°C,At high case temperatures, thermal limita - tion will reduce the power that can be handled to values less than the limitations imposed by second breakdown.

FIG-5 DC CURRENT GAIN