

HORIZONTAL DEFLECTION TRANSISTORS

...designed for use in large screen color deflection circuits

FEATURES:

* Collector-Emitter Sustaining Voltage

$$V_{CE(sus)} = 600V(\text{Min})$$

* Fast Switching Time

$$t_f = 0.8 \mu s @ I_C = 5.0A$$

* Glass Passivated Collector-Base Junction

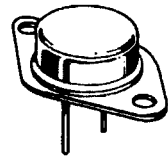
NPN

2SC1325A

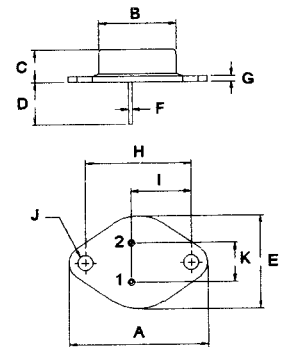
**6.0 AMPERE
NPN SILICON
POWER TRANSISTORS
1500 VOLTS
80 WATTS**

MAXIMUM RATINGS

Characteristic	Symbol	2SC1325A	Unit
Collector-Emitter Voltage	V_{CEO}	600	V
Collector-Base Voltage	V_{CBO}	1500	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	6.0 12	A
Base current	I_B	2.0	A
Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	80 0.64	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ C$



TO-3



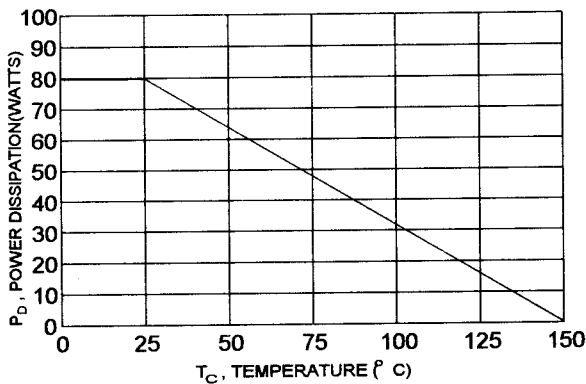
PIN 1. BASE
2. EMITTER
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.56	$^\circ C/W$

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 Voltage ($I_C = 100\text{ mA}$, $I_B = 0$)	V_{CE0}	600		V
Collector Cutoff Current ($V_{CE} = 1500\text{ V}$, $V_{BE} = 0$)	I_{CES}		1.0	mA
Collector Cutoff Current ($V_{CB} = 1000\text{ V}$, $I_E = 0$)	I_{CBO}		20	μA
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_C = 0$)	I_{EBO}		200	μA

ON CHARACTERISTICS (1)

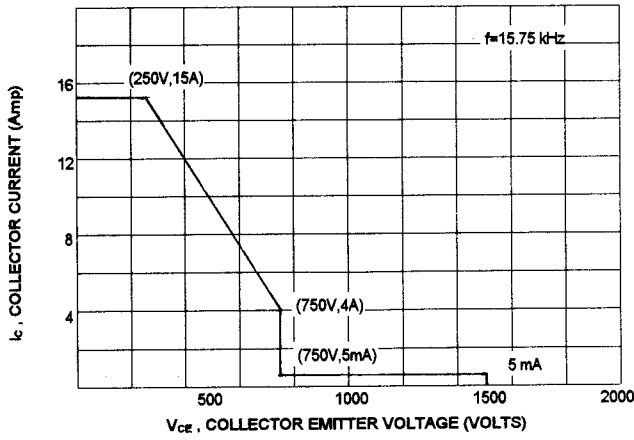
DC Current Gain ($I_C = 1.0\text{ A}$, $V_{CE} = 15\text{ V}$) ($I_C = 5.0\text{ A}$, $V_{CE} = 15\text{ V}$)	hFE	10 5.0	45 35	
Collector-Emitter Saturation Voltage ($I_C = 5.0\text{ A}$, $I_B = 1.2\text{ A}$)	$V_{CE(sat)}$		4.0	V
Base-Emitter Saturation Voltage ($I_C = 5.0\text{ A}$, $I_B = 1.2\text{ A}$)	$V_{BE(sat)}$		1.1	V

SWITCHING CHARACTERISTICS

Storage Time	$I_C = 5.0\text{ A}$, $I_{B1} = -I_{B2} = 1.0\text{ A}$ $P_w = 20\mu\text{ s}$	t_s	10	$\mu\text{ s}$
Fall Time		t_f	0.8	$\mu\text{ s}$

(1) Pulse Test: Pulse Width $\approx 300\mu\text{ s}$, Duty Cycle $\leq 2.0\%$

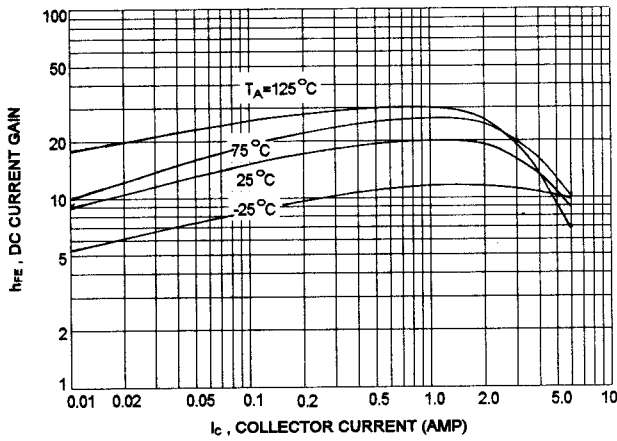
ACTIVE-REGION SAFE OPERATING AREA (SOA)



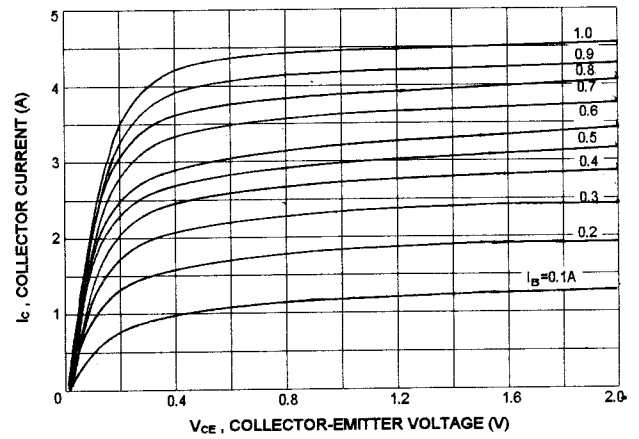
There are two limitation on the power handling ability of a transistor: average junction temperature and second breakdown safe operating area curves indicate $I_C - V_{CE}$ limits of the transistor that must be observed for reliable operation i.e., the transistor must not be subjected to greater dissipation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

The data of SOA curve is base on $T_{J(PK)} = 150^\circ\text{C}$; T_C is variable depending on conditions. 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.

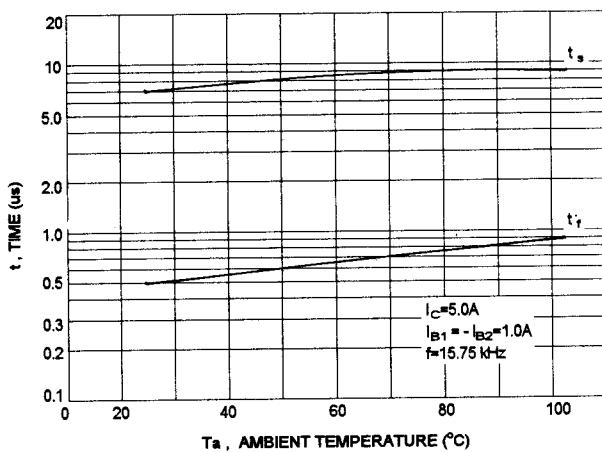
DC CURRENT GAIN



$I_C - V_{CE}$



SWITCHING TIME- AMBIENT TEMPERATURE



COLLECTOR SATURATION REGION

