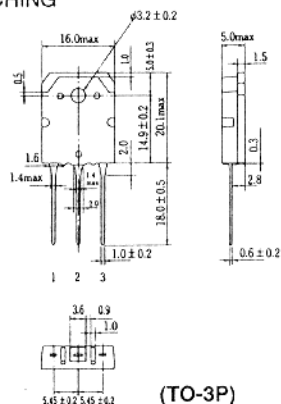


2SC3322

SILICON NPN TRIPLE DIFFUSED

HIGH VOLTAGE, HIGH SPEED AND HIGH POWER SWITCHING



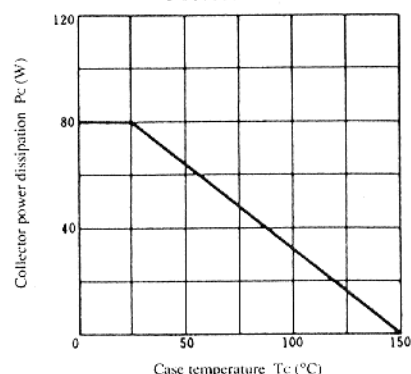
1. Base
 2. Collector
(Flange)
 2. Emitter
- (Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Item	Symbol	2SC3322	Unit
Collector to base voltage	V _{CBO}	900	V
Collector to emitter voltage	V _{CEO}	800	V
Emitter to base voltage	V _{EB0}	7	V
Collector current	I _C	5	A
Collector peak current	i _{C(peak)}	10	A
Base current	I _B	2.5	A
Collector power dissipation	P _C *	80	W
Junction temperature	T _j	150	°C
Storage temperature	T _{sig}	-55 to +150	°C

* Value at $T_c = 25^\circ\text{C}$

MAXIMUM COLLECTOR DISSIPATION
CURVE

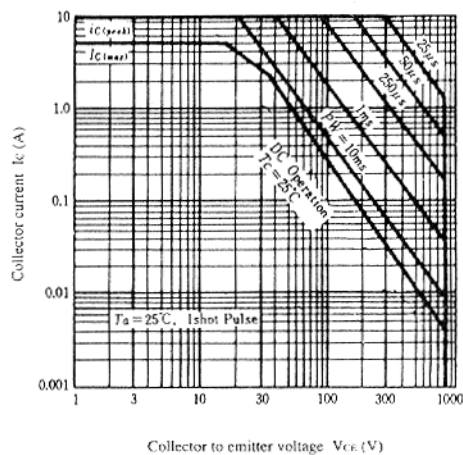


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

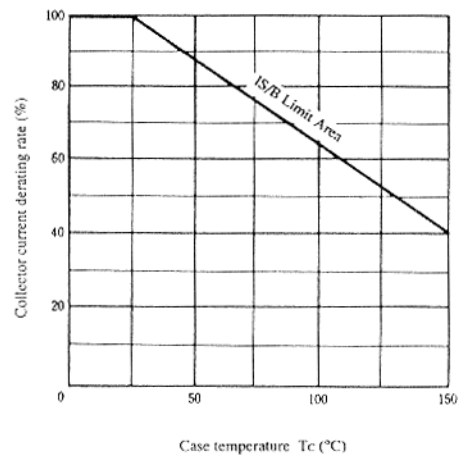
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter sustain voltage	$V_{CE(sus)}$	$I_C = 0.2A, R_{BE} = \infty, L = 100mH$	800	—	—	V
	$V_{CEX(sus)}$	$I_C = 4A, I_{B1} = 1.5A, I_{B2} = -0.8A, V_{BE} = -5.0V, L = 180\mu H, \text{Clamped}$	800	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10mA, I_C = 0$	7	—	—	V
Collector cutoff current	IC_{BO}	$V_{CB} = 750V, I_E = 0$	—	—	100	μA
	IC_{EO}	$V_{CE} = 650V, R_{BE} = \infty$	—	—	100	μA
DC current transfer ratio	h_{FE1}	$V_{CE} = 5V, I_C = 0.5A^*$	15	—	—	
	h_{FE2}	$V_{CE} = 5V, I_C = 3A^*$	7	—	—	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1.5A, I_B = 0.3A^*$	—	—	1.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$		—	—	1.5	V
Turn on time	t_{on}	$I_C = 3A, I_{B1} = 0.6A, I_{B2} = -1.5A, V_{CC} \approx 250V$	—	—	1.0	μs
Storage time	t_{stg}		—	—	3.0	μs
Fall time	t_f		—	—	1.0	μs

* Pulse Test

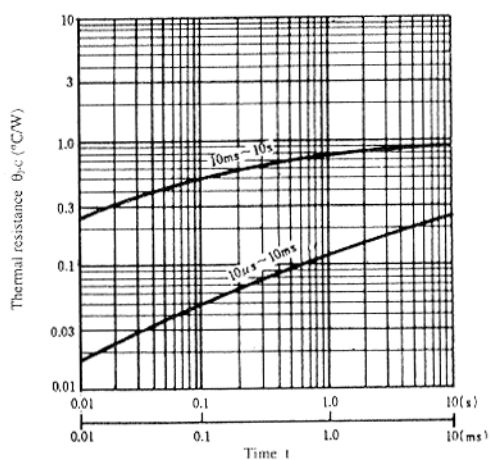
AREA OF SAFE OPERATION



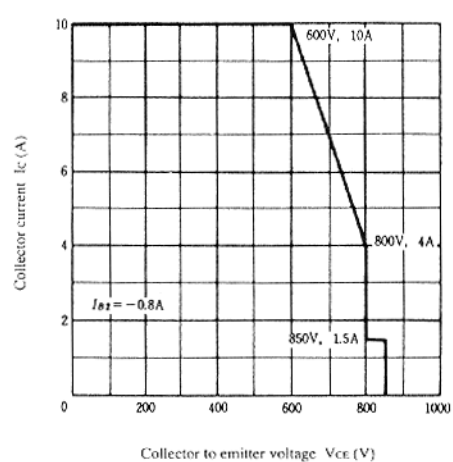
COLLECTOR CURRENT DERATING RATE



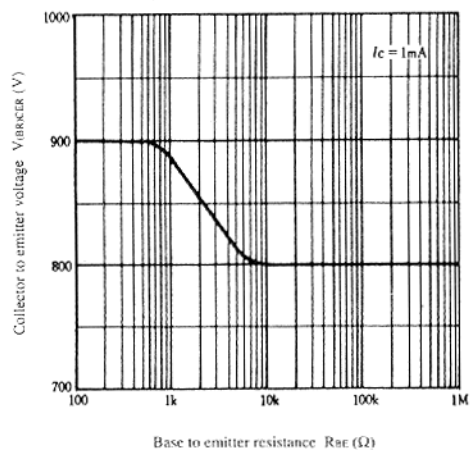
TRANSIENT THERMAL RESISTANCE



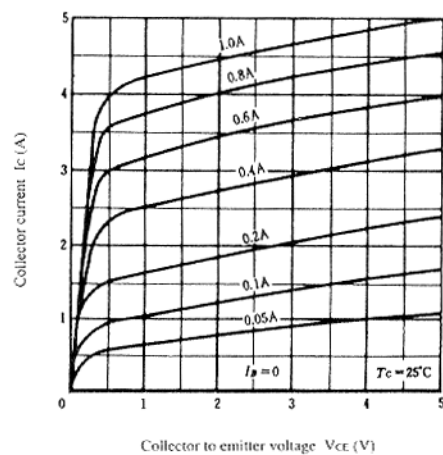
REVERSE BIAS AREA OF SAFE OPERATION



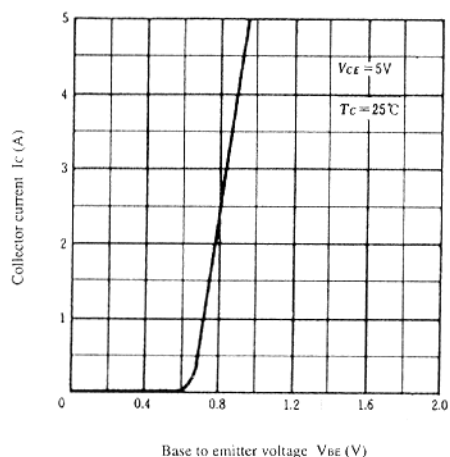
COLLECTOR TO EMITTER VOLTAGE VS. BASE TO EMITTER RESISTANCE



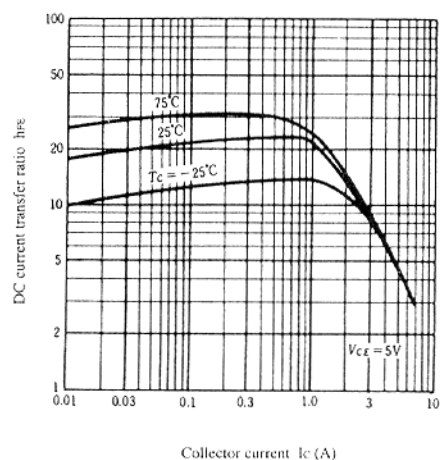
TYPICAL OUTPUT CHARACTERISTICS



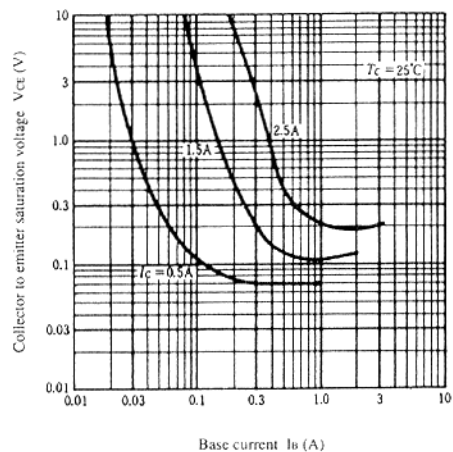
TYPICAL TRANSFER CHARACTERISTICS



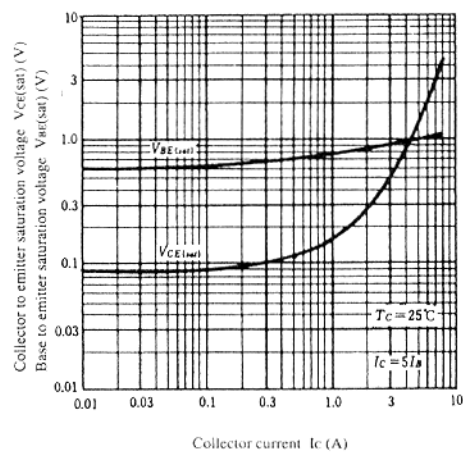
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



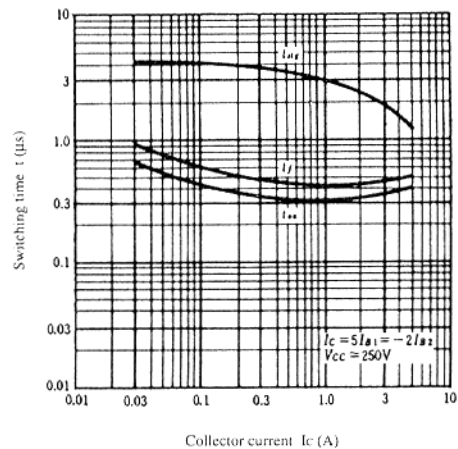
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



SWITCHING TIME VS. CASE TEMPERATURE

