2SC3528

Silicon PNP Triple-Diffused Planar Type

High Breakdown Voltage, High Speed Switching

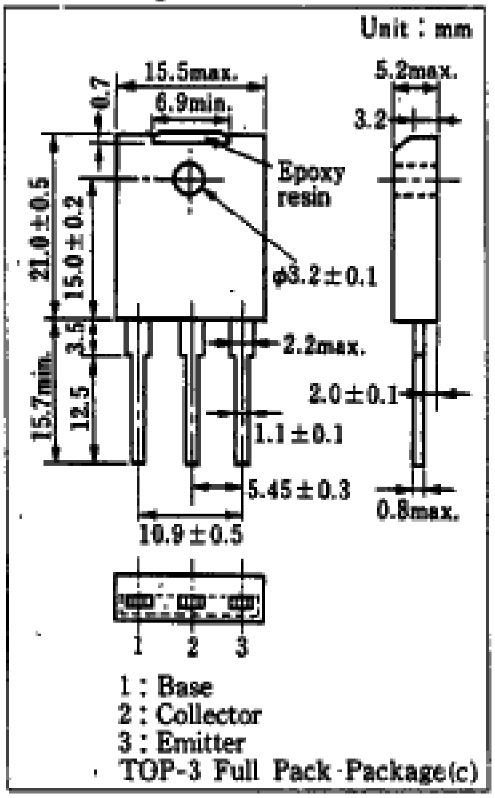
■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of DC current gain (h_{FE})
- High collector current (I_C)
- "Full Pack" package for simplified mounting on a heat sink with one screw

■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Collector-base voltage		V_{CBO}	500	V
Collector-emitter voltage		V_{CES}	500	V
		V_{CEO}	400	V
Emitter-base voltage		V_{EBO}	7	V
Peak collector current		I_{CP}	30	A
Collector current		I_C	20	A
Base current		I_B	6	A
Collector power dissipation	Tc=25℃	P_C	125	W
	Ta=25℃		3	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	−55～+150	℃

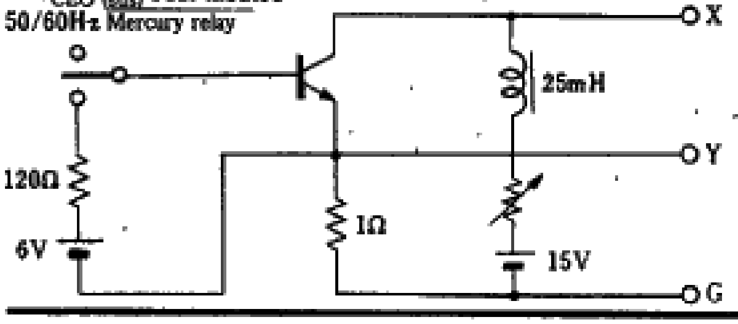
■ Package Dimensions



■ Electrical Characteristics (Tc=25°C)

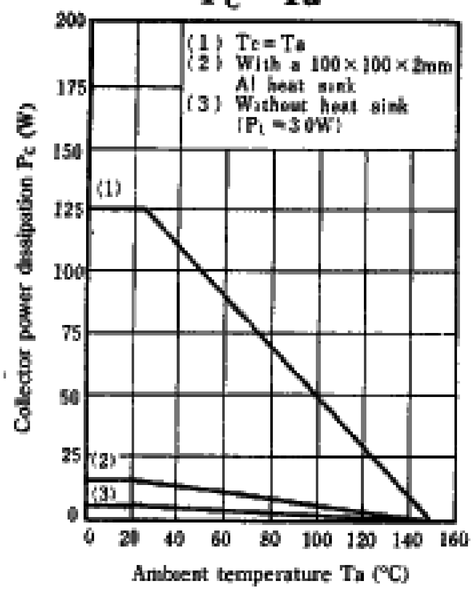
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	V_{CB}=500 V, I_E=0			100	μA
Emitter cutoff current	I_{EBO}	V_{EB}=7 V, I_C=0			100	μA
Collector-emitter voltage	$V_{CEO(sus)}$*	I_C=0.5 A, L=25 mH	400			V
DC current gain	h_{FE1}	V_{CE}=5V, I_C=2 A	15			
	h_{FE2}	V_{CE}=5 V, I_C=10 A	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10 A, I_B=2 A			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10 A, I_B=2 A			1.5	V
Transition frequency	f_T	V_{CE}=10V, I_C=1A, f=1MHz		15		MHz
Turn-on time	t_{on}	I_C=10 A			1	μs
Storage time	t_{stg}	I_{B1}=2.0A, I_{B2}=−2.0A			2.5	μs
Collector current fall time	t_f	V_{CC}=125 V			1	μs

* $V_{CEO(sus)}$ Test method

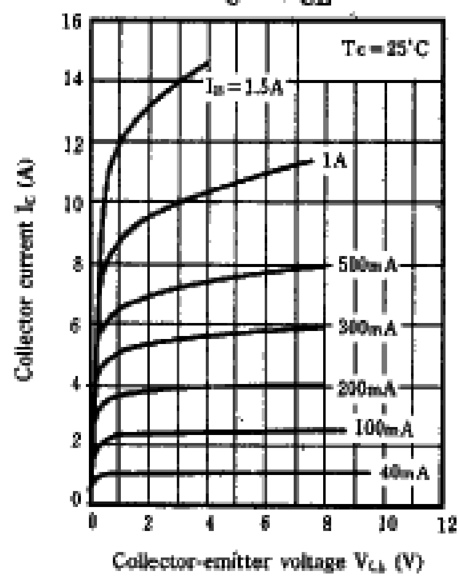


Panasonic

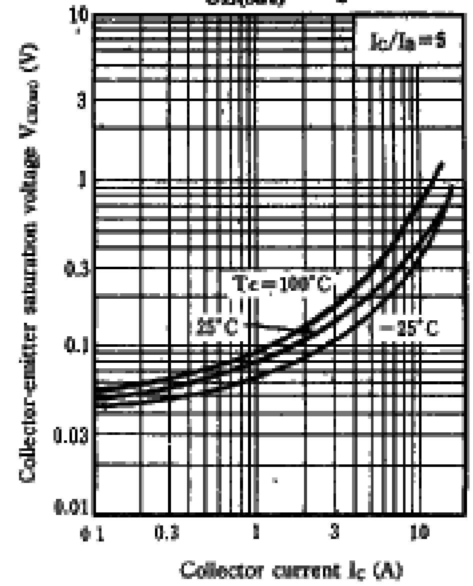
$P_C - T_a$



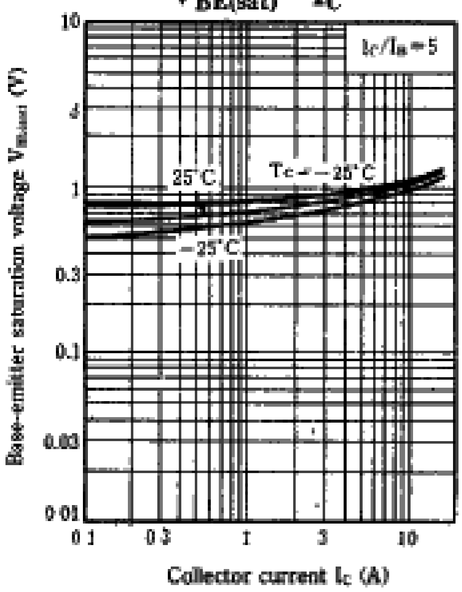
$I_C - V_{CE}$



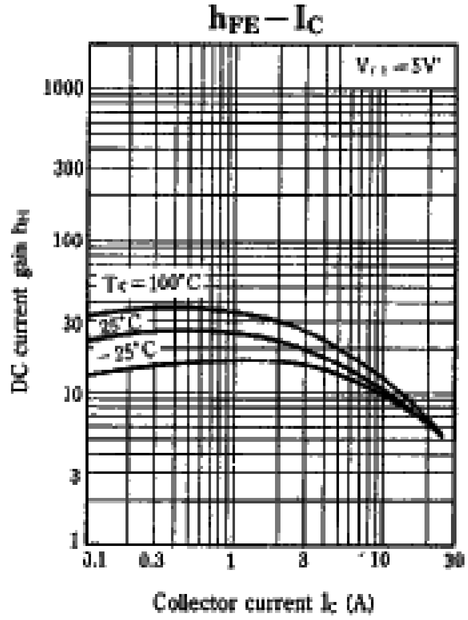
$V_{CE(sat)} - I_C$



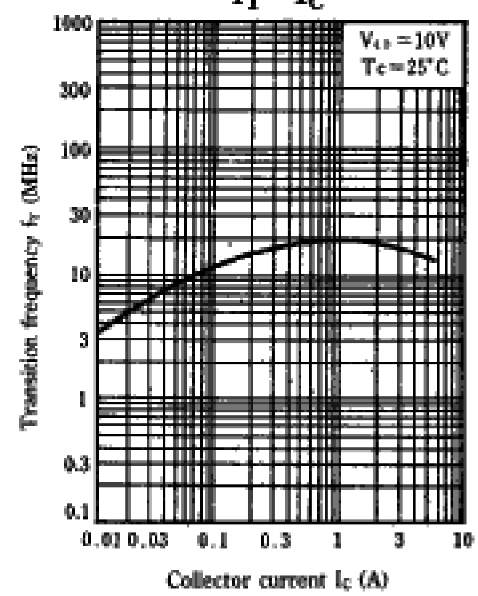
$V_{BE(sat)} - I_C$



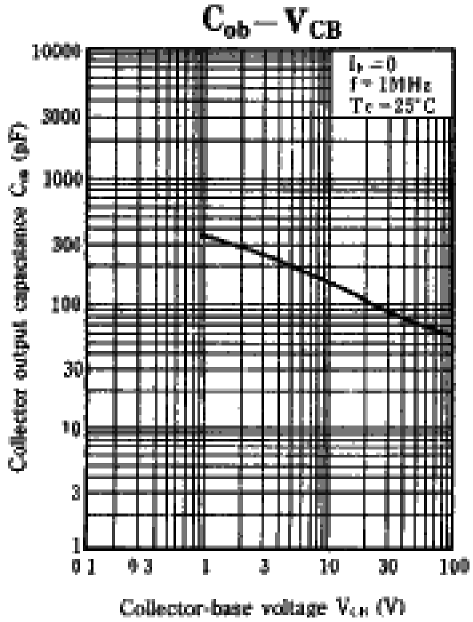
$h_{FE} - I_C$



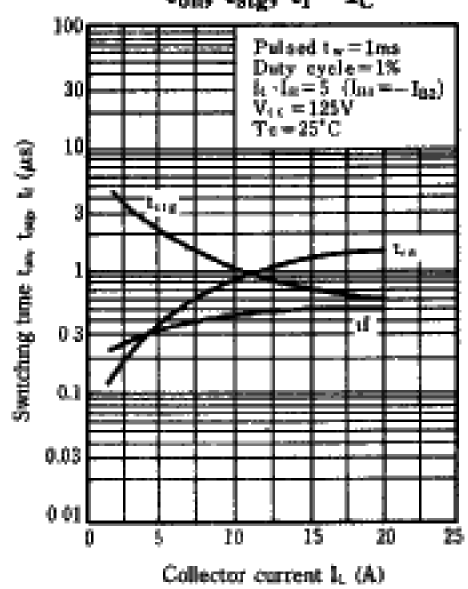
$f_T - I_C$



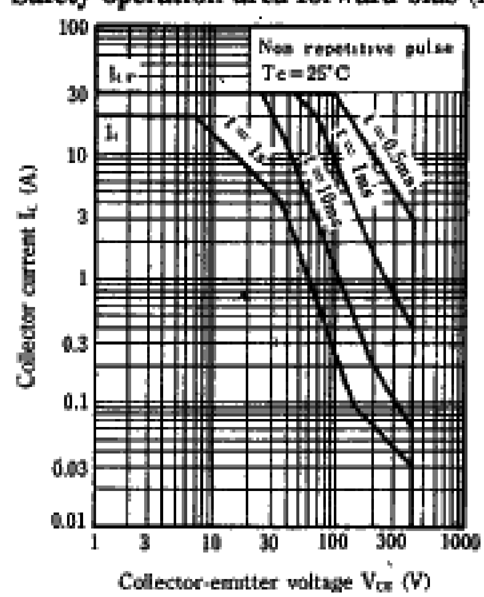
$C_{ob} - V_{CB}$



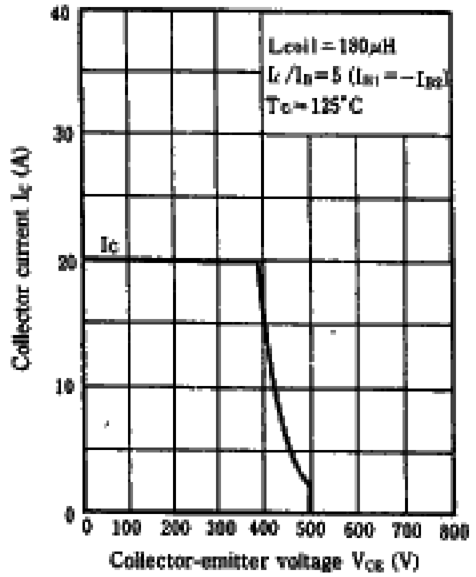
$t_{on}, t_{stg}, t_f - I_C$



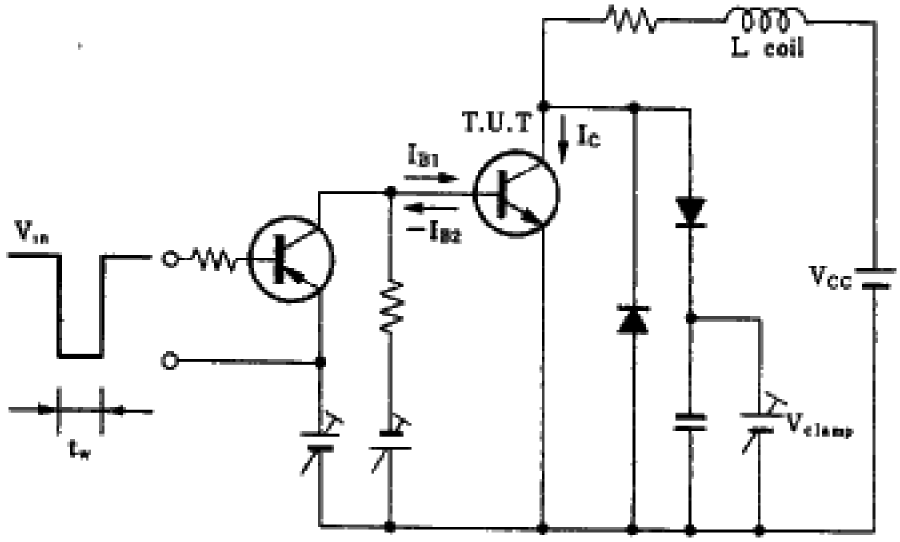
Safety operation area-forward bias (ASO)



Safety operation area-reverse bias (ASO)



Measurement circuit of reverse bias ASO



$R_{th(t)}$ -- t