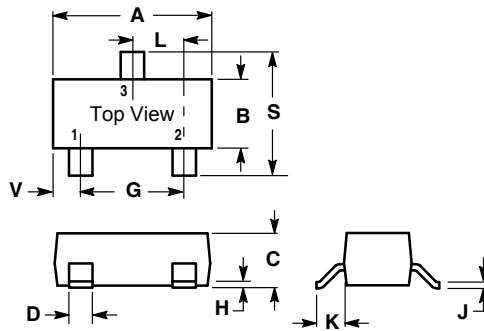
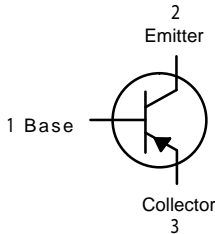
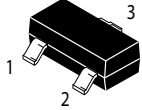


RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES



SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

MAXIMUM RATINGS* T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-30	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-2	A
P _D	Total Device Dissipation	310	mW
R _{θJA}	Thermal Resistance, junction to Ambient	403	°C/W
T _J , T _{stg}	Junction and Storage Temperature	-55-150	°C

MARKING :589

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	-50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-10mA, I _B =0	-30			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-30V, I _E =0			-0.1	μA
Collector-emitter cut-off current	I _{CES}	V _{CE} =-30V			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.1	μA
DC current gain	h _{FE1}	V _{CE} =-2V, I _C =-1mA	100			
	h _{FE2}	V _{CE} =-2V, I _C =-500mA	100		300	
	h _{FE3}	V _{CE} =-2V, I _C =-1A	80			
	h _{FE4}	V _{CE} =-2V, I _C =-2A	40			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C = -500mA, I _B =-50 mA			-0.25	V
	V _{CE(sat)2}	I _C = -1A, I _B =-100 mA			-0.3	V
	V _{CE(sat)3}	I _C = -2A, I _B =-200 mA			-0.65	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -1A, I _B =-100 mA			-1.2	V
Base-emitter Turn-on voltage	V _{BE(on)}	V _{CE} =-2V, I _C =-1A			-1.1	V
Transition frequency	f _T	V _{CE} =-5V, I _C =-100 mA , f =100MHz	100			MHz
Collector Output Capacitance	C _{ob}	f=1MHz			15	pF

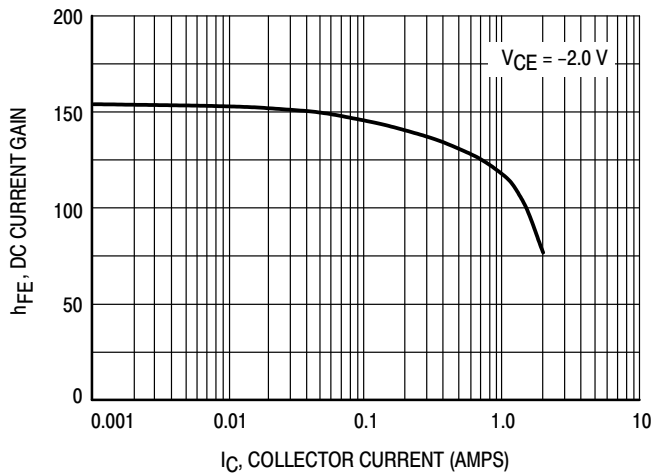


Figure 1. DC Current Gain versus Collector Current

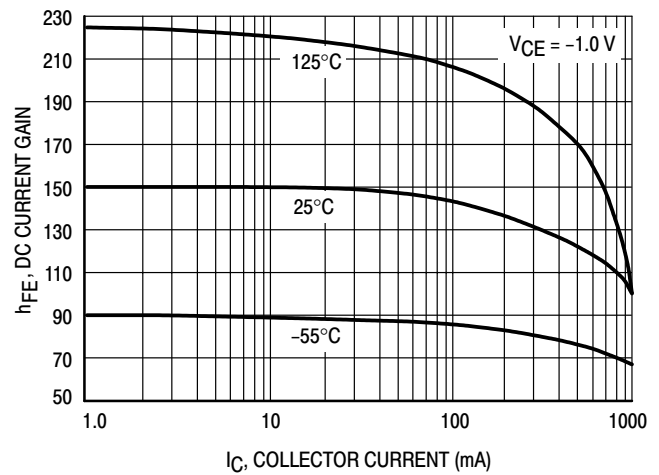


Figure 2. DC Current Gain versus Collector Current

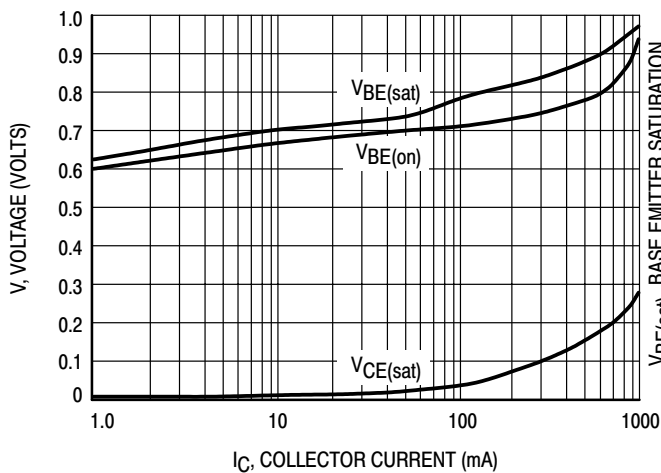


Figure 3. "On" Voltages

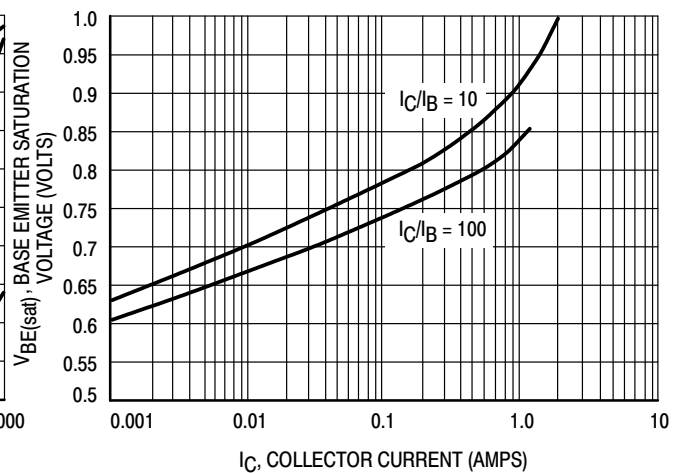


Figure 4. Base Emitter Saturation Voltage versus Collector Current

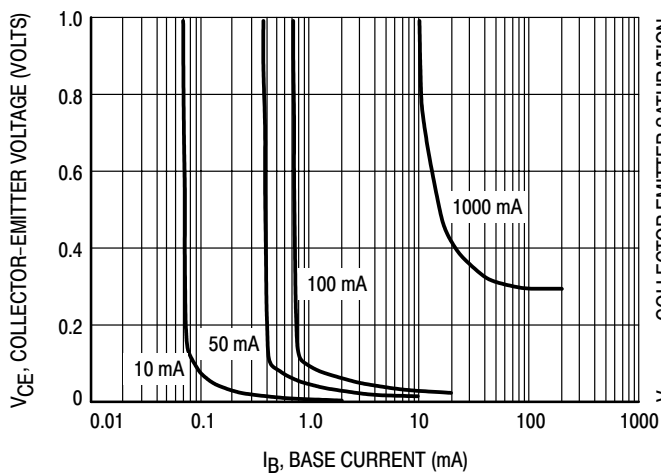


Figure 5. Collector Emitter Saturation Voltage versus Collector Current

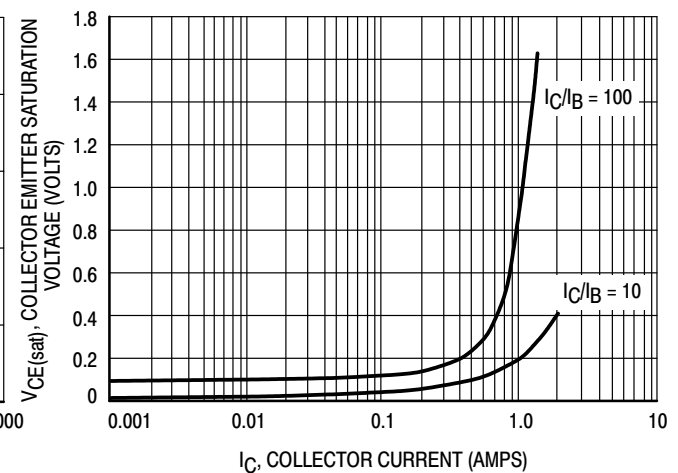


Figure 6. Collector Emitter Saturation Voltage versus Collector Current

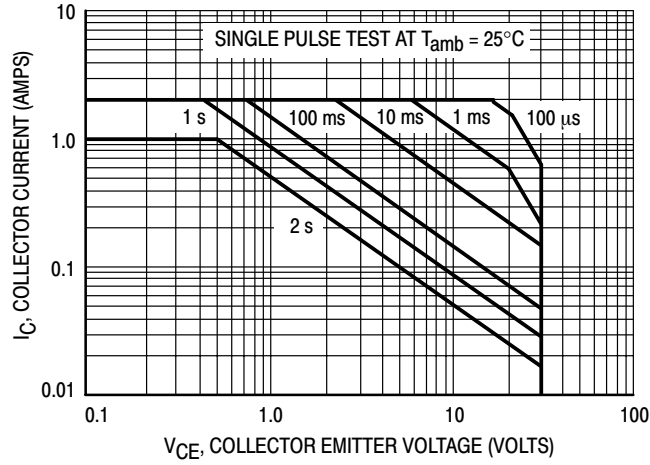


Figure 7. Safe Operating Area

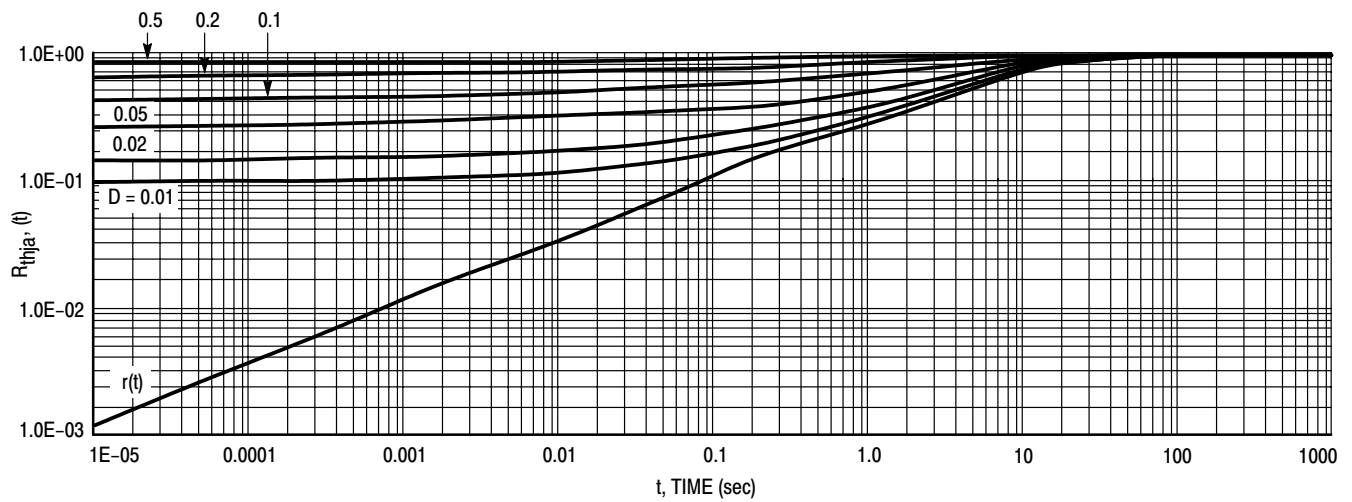


Figure 8. Normalized Thermal Response