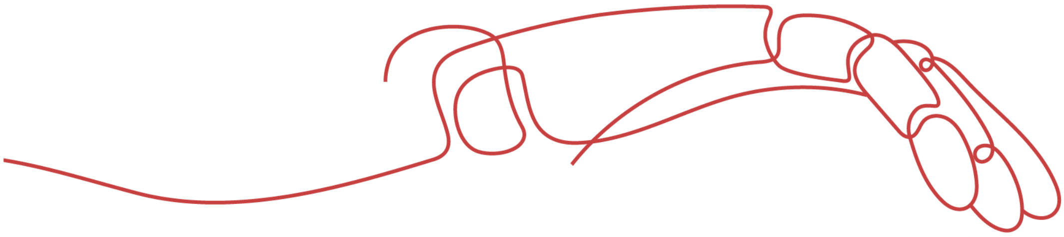
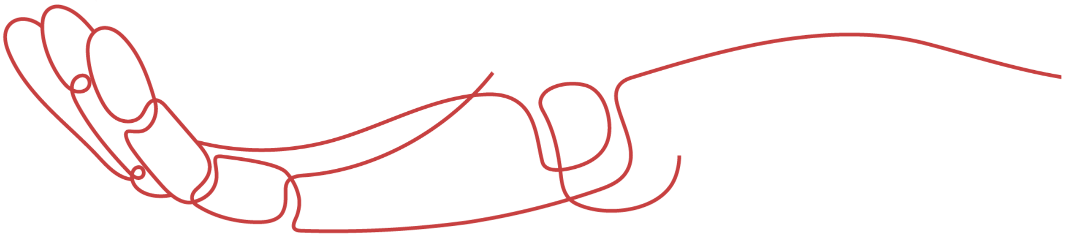
JG® Techology



PRODUCT DATA SHEET



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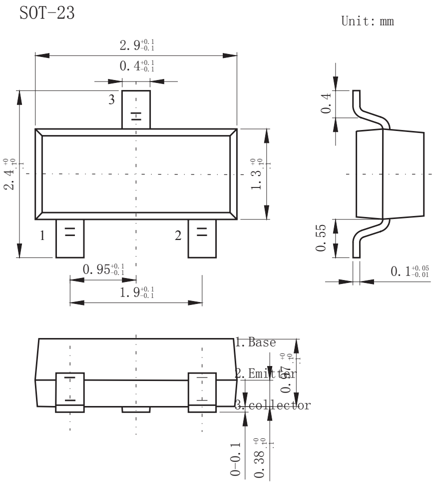
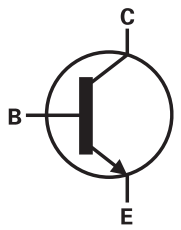
Datasheet Resources Samples



■ Features

- ● 6V reverse blocking capability
- ● Low saturation voltage - 90mV @ 50mA
- ● I_C=150mA continuous



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	500	V
Collector-Emitter Voltage	V_{CEV}	500	
Collector - Emitter Voltage	V_{CEO}	450	
Emitter - Base Voltage	V_{EBO}	6	
Emitter-Collector Voltage	V_{ECV}	6	
Collector Current - Continuous	I_C	150	mA
Collector Current - Pulse	I_{CP}	500	
Base Current	I_B	200	
Power Dissipation @ Ta=25°C	P_D	625	mW
@ Ta=25°C (Note.1)		806	
Junction to ambient	$R_{\theta JA}$	200	°C/W
(Note.1)		155	
Junction Temperature	T_J	125	℃
Storage Temperature Range	T_{stg}	-55 to 150	

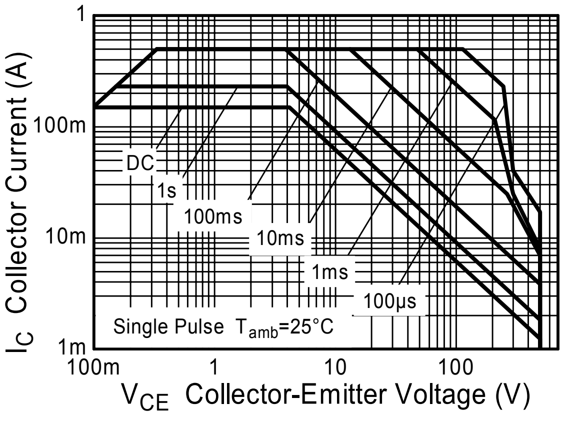
Note.1: as above measured at t<5secs.

■ Electrical Characteristics Ta = 25℃

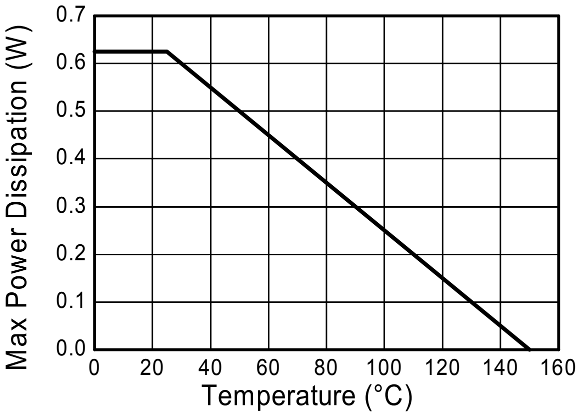
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E= 0	500			V
Collector-emitter breakdown voltage	V_{CEV}	I_C = 10uA, 0.3V > V_{BE} > -1V	500			
Collector- emitter breakdown voltage	V_{CEO}	I_C= 10 mA， I_B= 0 (Note.1)	450			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A， I_C= 0	6			
Emitter-base breakdown voltage	V_{ECV}	I_C = 1uA, 0.3V > V_{BC} > -6V	6			
Collector-base cut-off current	I_{CBO}	V_{CB}= 450 V , I_E= 0			100	nA
Collector- emitter cut-off current	I_{CES}	V_{CE}= 450 V , I_E= 0			100	
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=20 mA, I_B=2mA (Note.1)			75	mV
		I_C=50 mA, I_B=6mA (Note.1)			90	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C= 50 mA, I_B= 5mA (Note.1)			0.9	V
Base-emitter turn-on voltage	$V_{BE(on)}$	V_{CE}= 10V, I_C= 50mA (Note.1)			0.9	
DC current gain	$h_{FE(1)}$	V_{CE}= 10V, I_C= 30mA	50			
	$h_{FE(2)}$	V_{CE}= 10V, I_C= 50mA		70		
Turn-on time	t_{on}	I_C = 50mA, V_C =100V I_{B1}=5mA, I_{B2} =10mA		113		ns
Turn-off time	t_{off}			3450		
Collector output capacitance	C_{ob}	V_{CB}= 20V, f=1MHz			5	pF
Transition frequency	f_T	V_{CE}= 20V, I_C= 10mA,f=20MHz	50			MHz

Note.1: Pulse width = 300us; duty cycle <2%

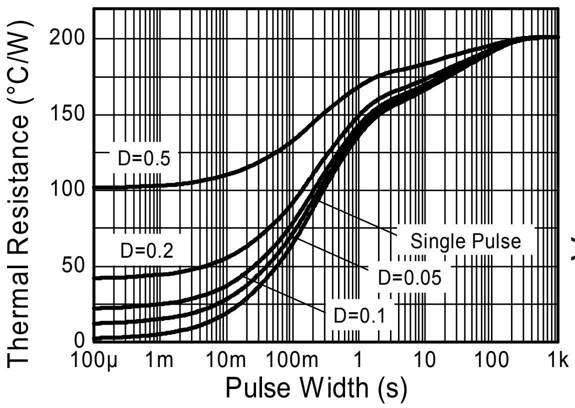
■ Typical Characterisitics



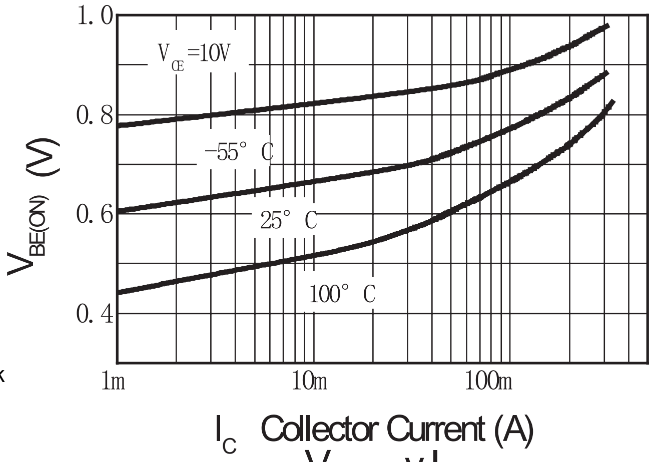
Safe Operating Area



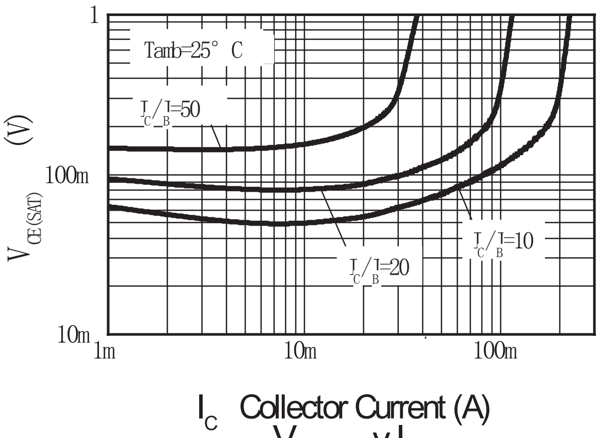
Derating Curve



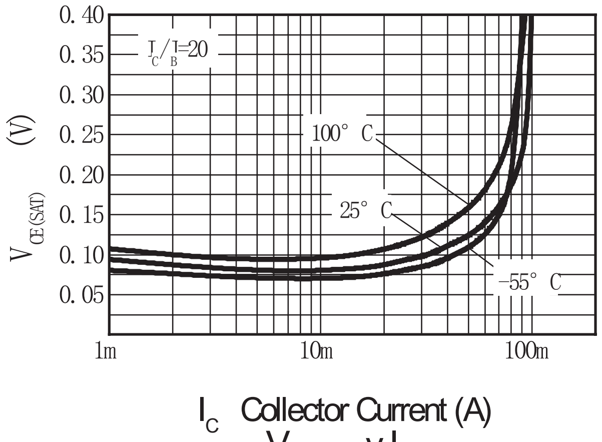
Transient Thermal Impedance



$V_{BE(ON)}$ v I_C

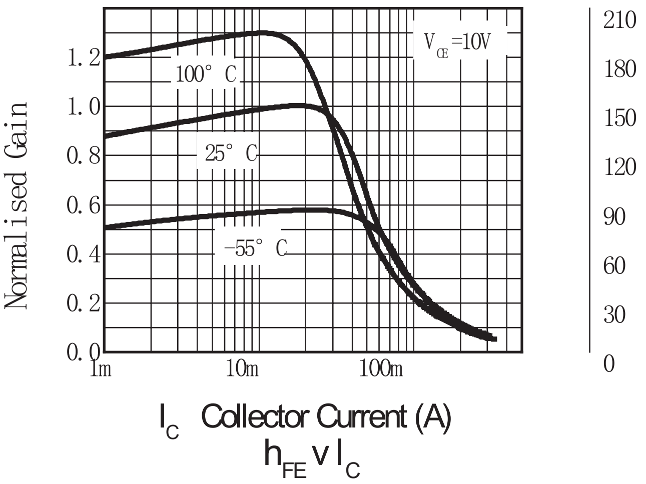


$V_{CE(SAT)}$ v I_C

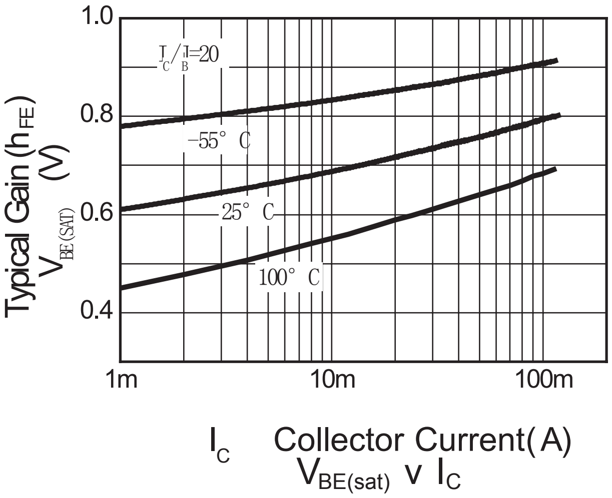


$V_{CE(SAT)}$ v I_C

■ Typical Characterisitics



h_{FE} v I_C



$V_{BE(sat)}$ v I_C

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