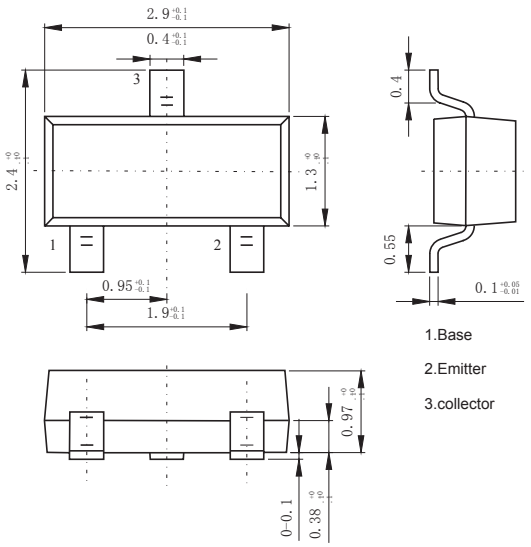
RMMT619

NPN Transistors

SOT-23

Unit: mm



■ Features

- Collector Current Capability I_C=2A
- Collector Emitter Voltage V_{CEO}=50V

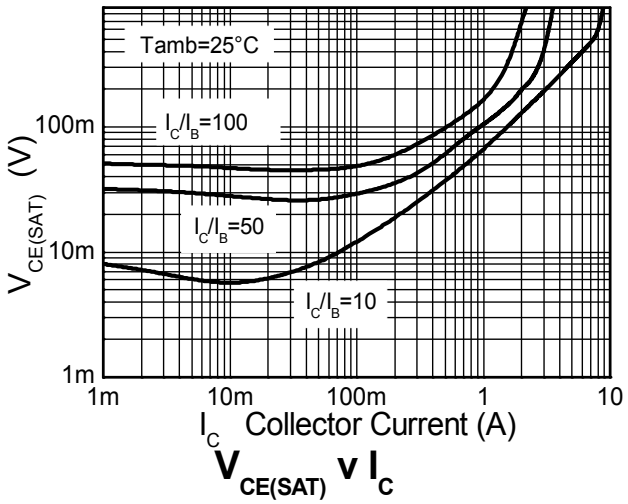
■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	2	A
Collector Current - Pulse	I_{CP}	6	
Base Current	I_B	0.5	
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

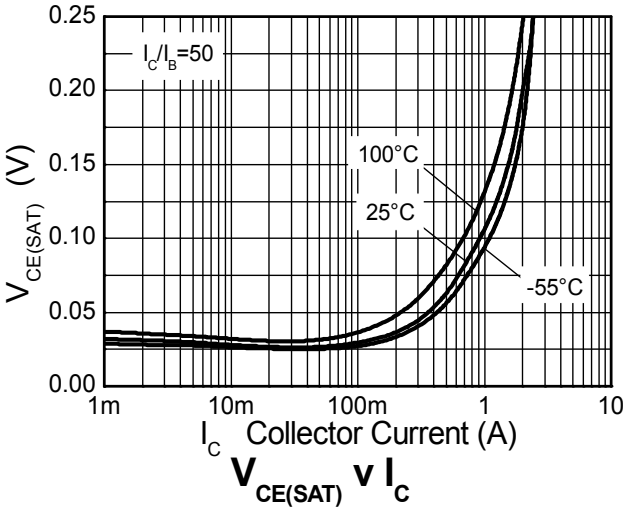
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E= 0	50			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 10 mA， I_B= 0	50			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A， I_C= 0	5			
Collector-base cut-off current	I_{CBO}	V_{CB}= 40 V , I_E= 0			100	nA
Collector- emitter cut-off current	I_{CES}	V_{CE}= 40 V , I_E= 0			100	
Emitter cut-off current	I_{EBO}	V_{EB}= 4V , I_C=0			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100 mA, I_B=10mA			20	mV
		I_C=1A, I_B=10mA			200	
		I_C=2A, I_B=50mA			220	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=2A, I_B=50mA			1	V
Base-emitter turn-on voltage	$V_{BE(on)}$	V_{CE}= 2V, I_C= 2A			1	
DC current gain	h_{FE}	V_{CE}= 2V, I_C= 10mA	200			
		V_{CE}= 2V, I_C= 200mA	300			
		V_{CE}= 2V, I_C= 1A	200			
		V_{CE}= 2V, I_C= 2A	100			
		V_{CE}= 2V, I_C= 6A		40		
Turn-on time	t_{on}	V_{CC}=10V, I_C=1A I_{B1}=-I_{B2}=10mA		170		ns
Turn-off time	t_{off}			750		
Collector output capacitance	C_{ob}	V_{CB}= 10V, f=1MHz			20	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 50mA,f=100MHz	100			MHz

■ Typical Characterisitics



$V_{CE(SAT)}$ v I_C



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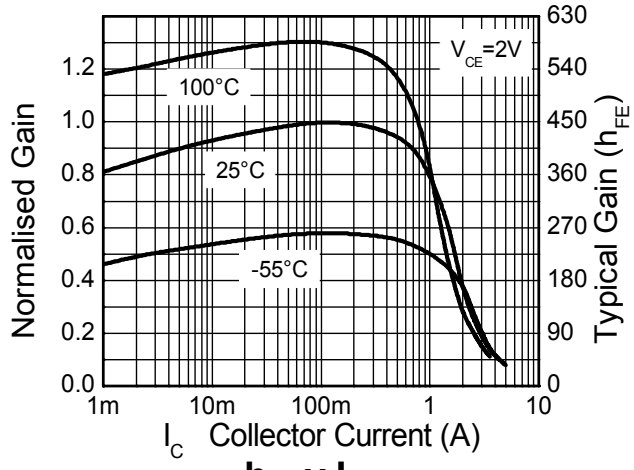
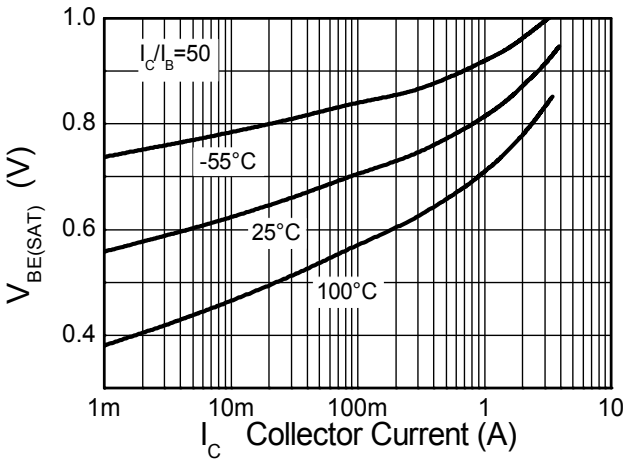
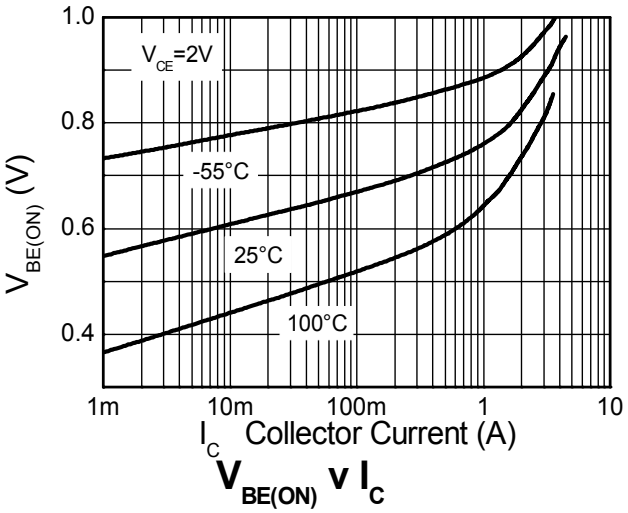


h_{FE} v I_C

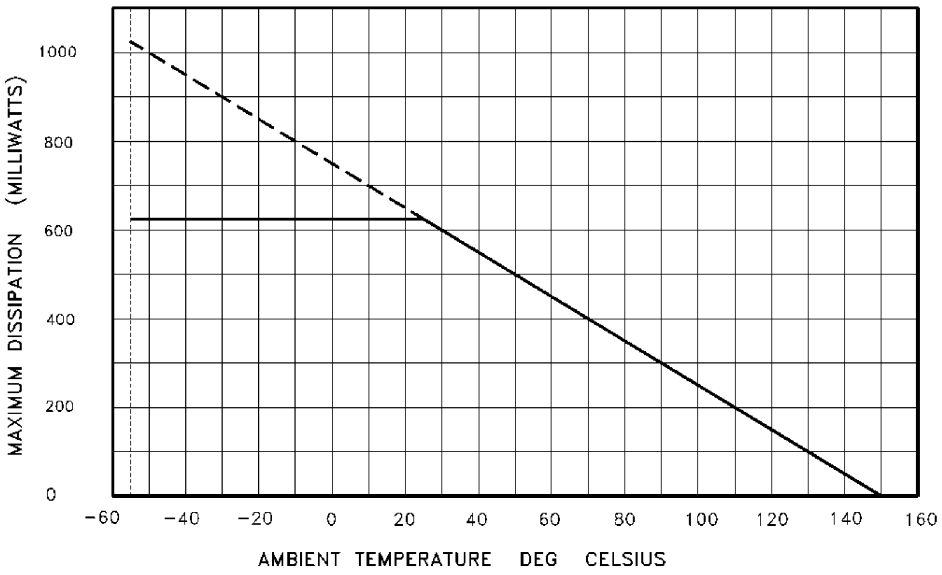


$V_{BE(SAT)}$ v I_C

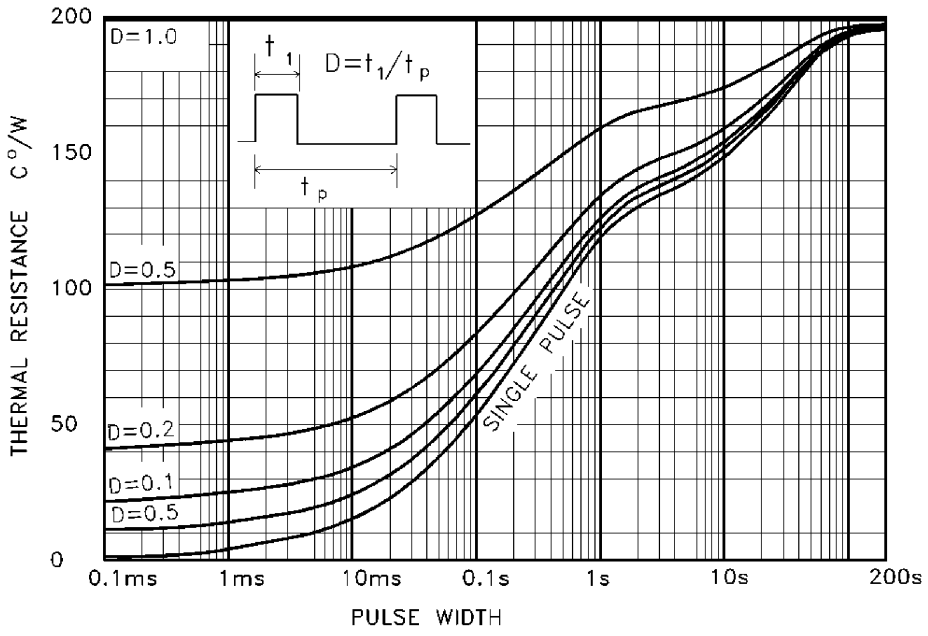


$V_{BE(ON)}$ v I_C

■ Typical Characterisitics



DERATING CURVE



MAXIMUM TRANSIENT THERMAL RESISTANCE