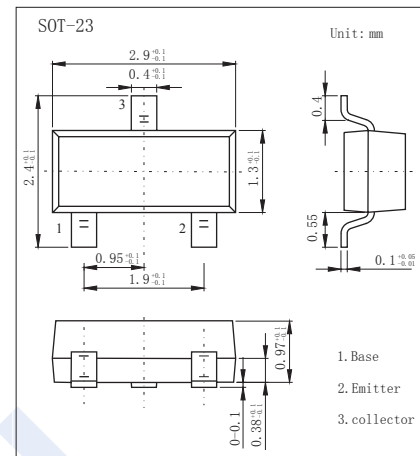
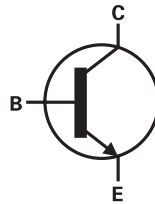


NPN Transistors

FMMT459 (KMMT459)

■ Features

- 6V reverse blocking capability
- Low saturation voltage - 90mV @ 50mA
- $I_c=150\text{mA}$ continuous



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	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 @ $T_a=25^\circ\text{C}$ @ $T_a=25^\circ\text{C}$ (Note.1)	P_D	625	mW
		806	
Junction to ambient (Note.1)	$R_{\theta JA}$	200	$^\circ\text{C/W}$
		155	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: as above measured at $t < 5\text{secs}$.

NPN Transistors

FMMT459 (KMMT459)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	500			V
Collector-emitter breakdown voltage	V _{CEV}	I _c = 10μA, 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 _{EB0}	I _E = 100 μ A, I _C = 0	6			
Emitter-base breakdown voltage	V _{ECV}	I _c = 1μA, 0.3V > V _{BC} > -6V	6			
Collector-base cut-off current	I _{CB0}	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 _{EB0}	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%

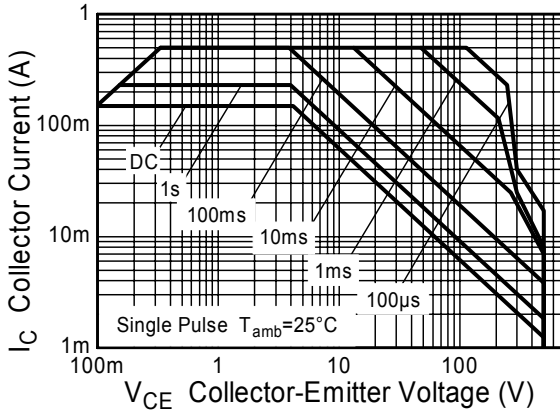
■ Marking

Marking	459
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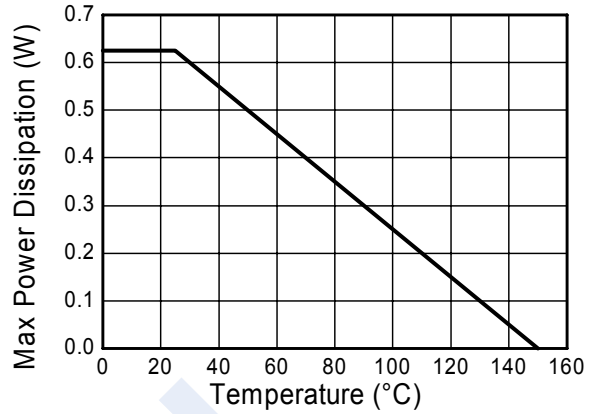
NPN Transistors

FMMT459 (KMMT459)

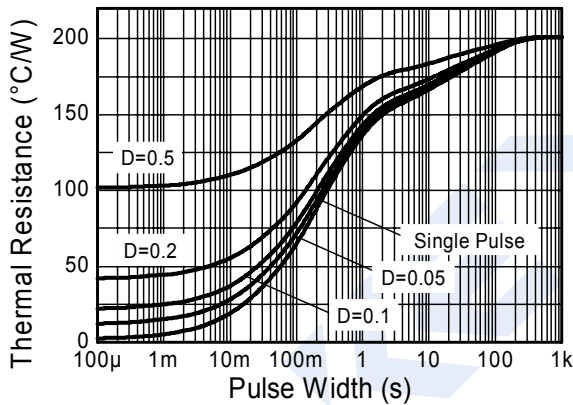
■ Typical Characteristics



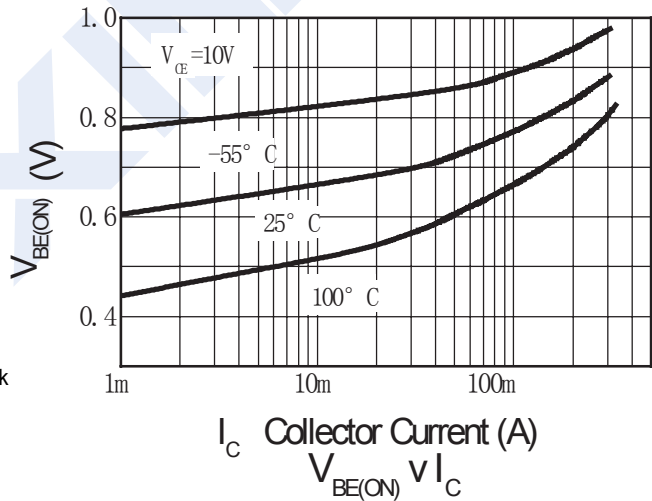
Safe Operating Area



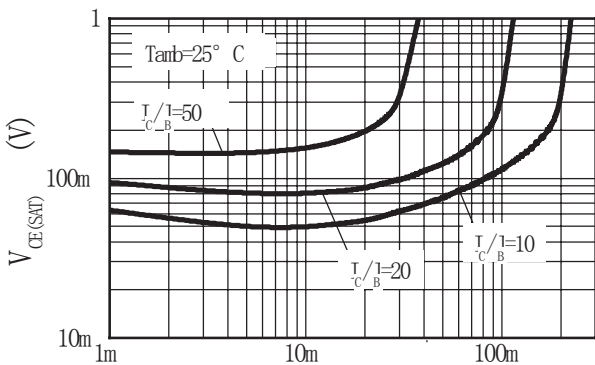
Derating Curve



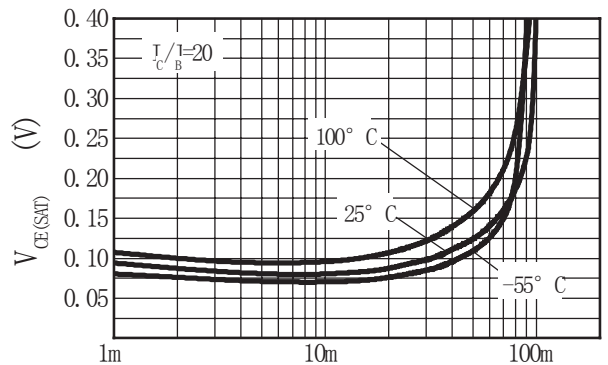
Transient Thermal Impedance



$V_{BE(ON)}$ vs I_C



$V_{CE(SAT)}$ vs I_C



$V_{CE(SAT)}$ vs I_C

NPN Transistors

FMMT459 (KMMT459)

■ Typical Characteristics

