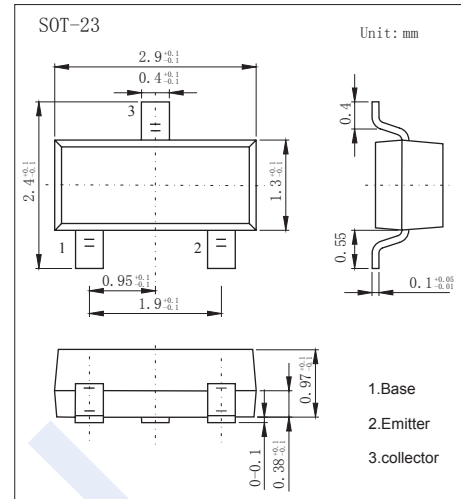


## NPN Transistors

### FMMT624 (KMMT624)

#### ■ Features

- Collector Current Capability  $I_c=1A$
- Collector Emitter Voltage  $V_{CE0}=125V$
- Complementary to FMMT723



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	125	V
Collector - Emitter Voltage	$V_{CE0}$	125	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_c$	1	A
Collector Current - Pulse	$I_{cP}$	3	
Base Current	$I_B$	0.5	
Collector Power Dissipation	$P_c$	625	mW
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 to 150	

## NPN Transistors

### FMMT624 (KMMT624)

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_c = 100 \mu\text{A}, I_E = 0$	125			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_c = 10 \text{mA}, I_B = 0$	125			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_c = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 100 \text{V}, I_E = 0$			100	nA
Collector- emitter cut-off current	$I_{CES}$	$V_{CE} = 100 \text{V}, I_E = 0$			100	
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4 \text{V}, I_c = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 100 \text{mA}, I_B = 10 \text{mA}$			50	mV
		$I_c = 500 \text{mA}, I_B = 50 \text{mA}$			150	
		$I_c = 500 \text{mA}, I_B = 10 \text{mA}$			220	
		$I_c = 1 \text{A}, I_B = 50 \text{mA}$			250	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 1 \text{A}, I_B = 50 \text{mA}$			1	V
Base-emitter turn-on voltage	$V_{BE(on)}$	$V_{CE} = 10 \text{V}, I_c = 1 \text{A}$			1	
DC current gain	$h_{FE}$	$V_{CE} = 10 \text{V}, I_c = 10 \text{mA}$	200			
		$V_{CE} = 10 \text{V}, I_c = 200 \text{mA}$	300			
		$V_{CE} = 10 \text{V}, I_c = 1 \text{A}$	100			
		$V_{CE} = 10 \text{V}, I_c = 3 \text{A}$		18		
Turn-on time	$t_{on}$	$V_{CC} = 50 \text{V}, I_c = 0.5 \text{A}$		60		ns
Turn-off time	$t_{off}$	$I_{B1} = -I_{B2} = 50 \text{mA}$		1300		
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{V}, f = 1 \text{MHz}$			15	pF
Transition frequency	$f_T$	$V_{CE} = 10 \text{V}, I_c = 50 \text{mA}, f = 100 \text{MHz}$	100			MHz

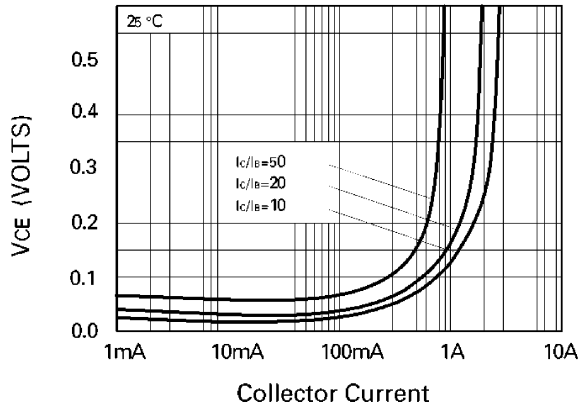
■ Marking

Marking	624
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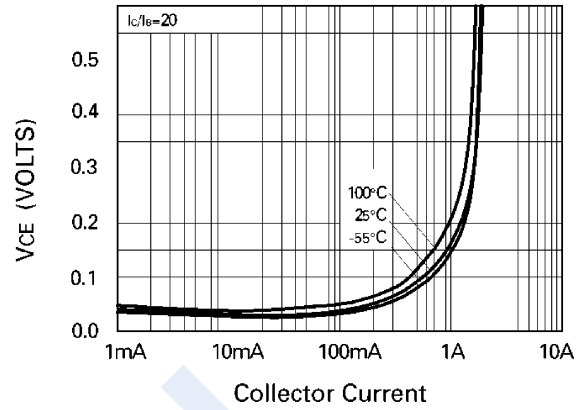
# NPN Transistors

## FMMT624 (KMMT624)

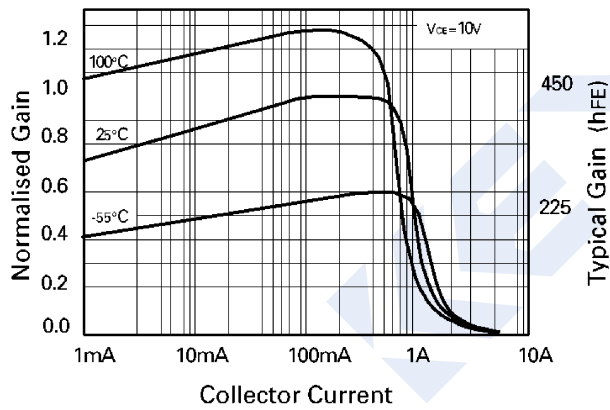
■ Typical Characteristics



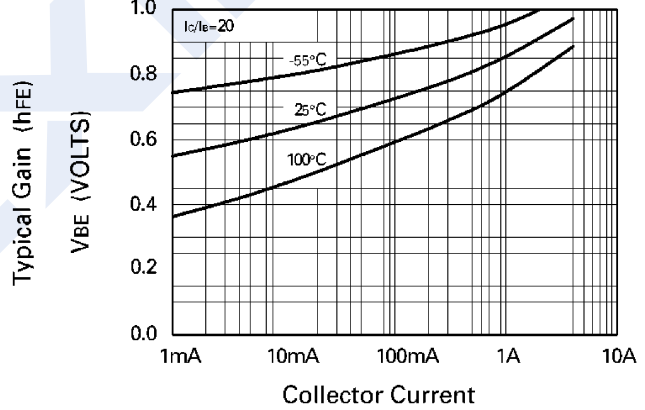
VCE(SAT) vs IC



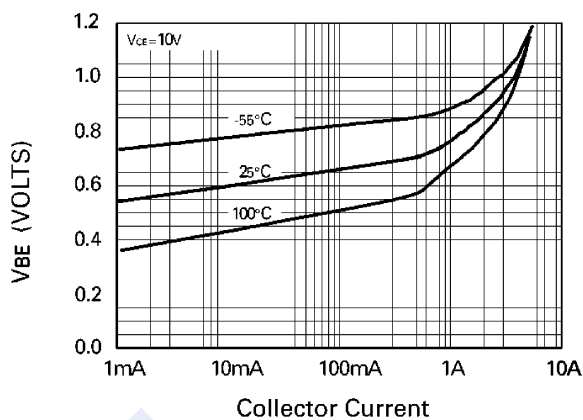
VCE(SAT) vs IC



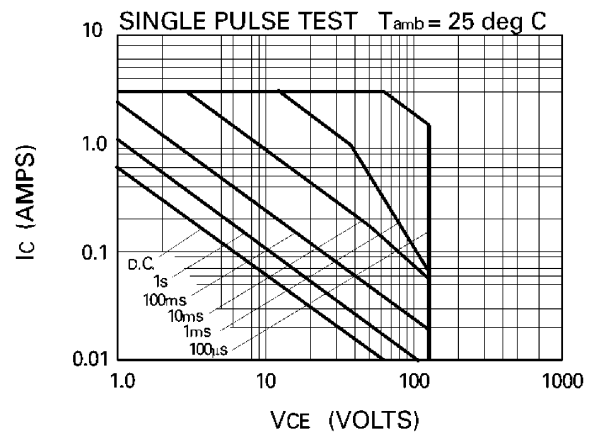
hFE vs IC



VBE(SAT) vs IC



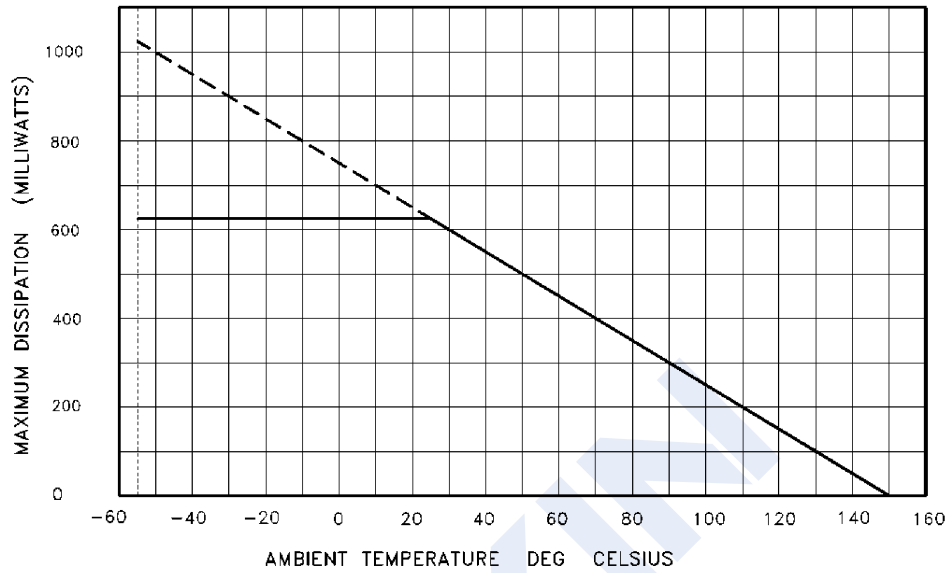
VBE(ON) vs IC



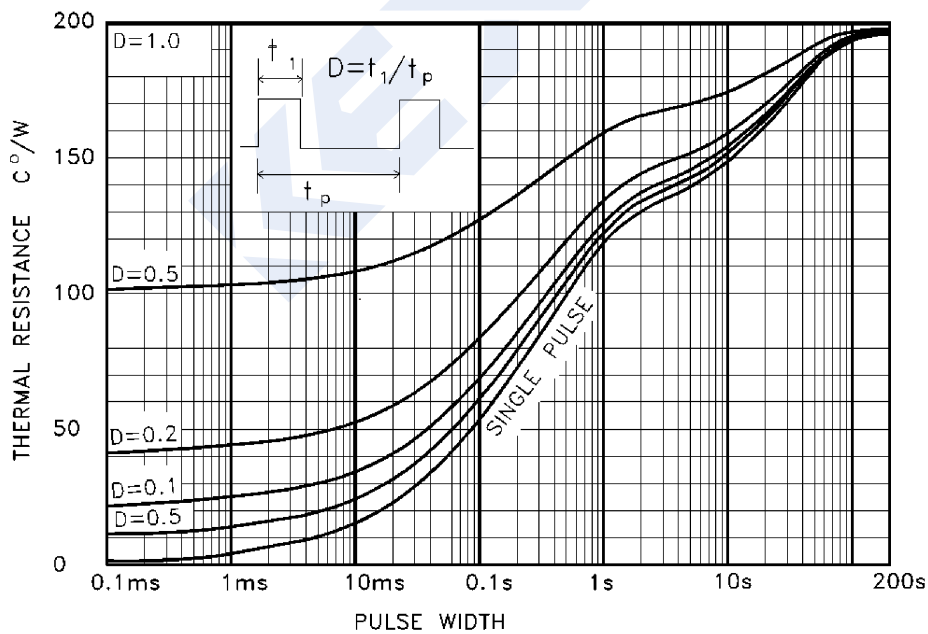
Safe Operating Area

## NPN Transistors FMMT624 (KMMT624)

■ Typical Characteristics



DERATING CURVE



MAXIMUM TRANSIENT THERMAL RESISTANCE