

## High Performance Transistor

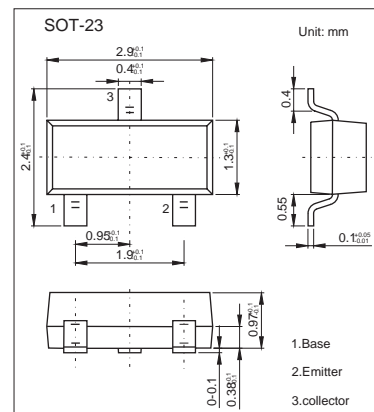
## FMMT455

## ■ Features

- 140 Volt  $V_{CE0}$
- 1 Amp continuous current
- $P_{tot} = 500$  mW

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	160	V
Collector-emitter voltage	$V_{CE0}$	140	V
Emitter-base voltage	$V_{EBO}$	5	V
Peak collector current	$I_{CM}$	2	A
Collector current	$I_C$	1	A
Base current	$I_B$	200	mA
Power dissipation	$P_{tot}$	500	mW
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$	160			V
Collector-emitter sustaining voltage *	$V_{CE0(sus)}$	$I_C=10\text{mA}$	140			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=140\text{V}$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}$			0.1	$\mu\text{A}$
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.7	V
Static Forward Current Transfer Ratio	$h_{FE}$	$I_C=150\text{mA}, V_{CE}=10\text{V}^*$	100		300	
		$I_C=1\text{A}, V_{CE}=10\text{V}^*$		10		
Transition frequency	$f_T$	$I_C=50\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$	100			MHz
Output capacitance	$C_{ob0}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			15	pF

\* Pulse test:  $t_p = 300$   $\mu\text{s}$ ;  $d \leq 0.02$ .

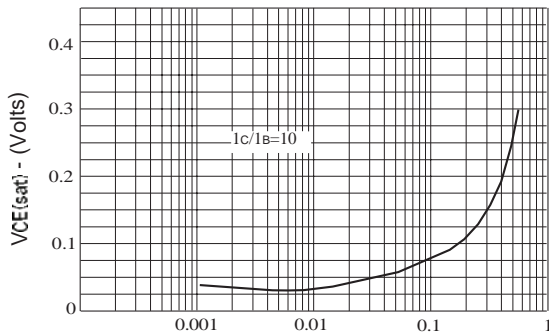
## ■ Marking

Marking	455
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# High Voltage Transistor

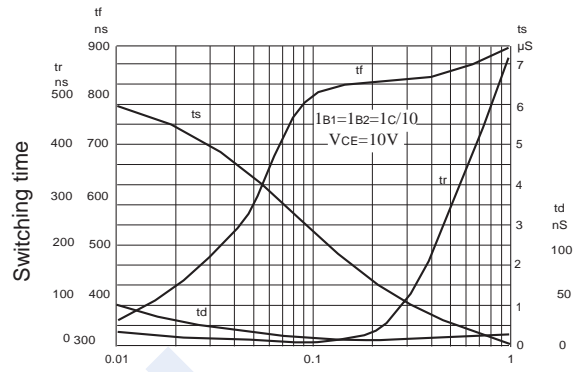
## FMMT458 (KMMT458)

### Typical Characteristics



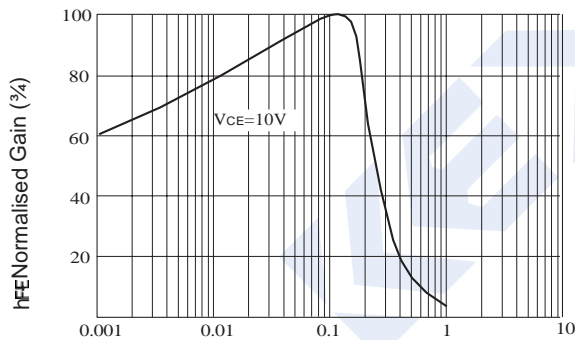
IC - Collector Current (Amps)

VCE(sat) V IC



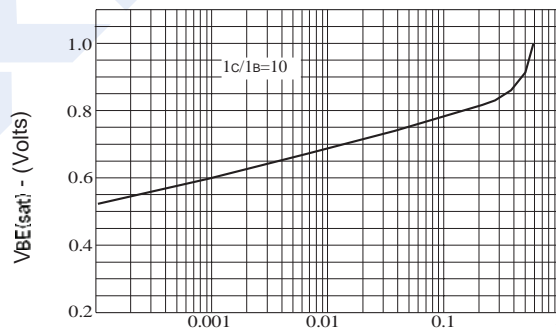
IC - Collector Current (Amps)

Typical Switching Speeds



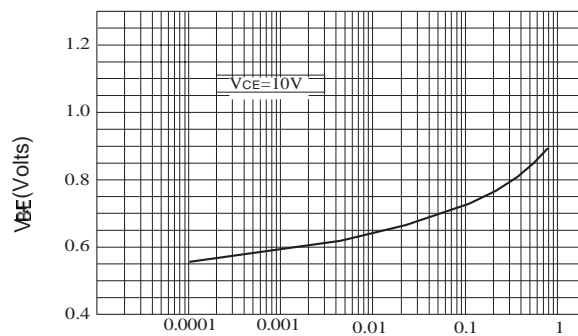
IC - Collector Current (Amps)

hFE V IC



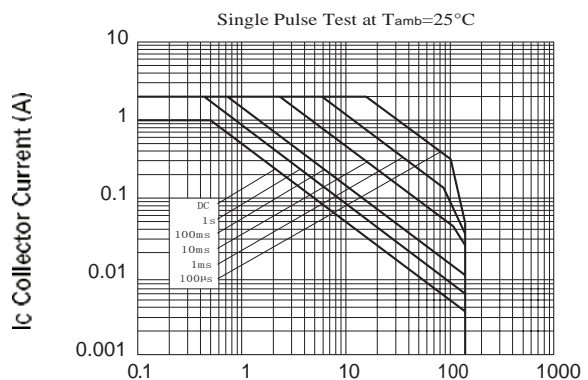
IC - Collector Current (Amps)

VBE(sat) V IC



IC - Collector Current (Amps)

VBE(on) V IC



VCE - Collector Emitter Voltage (V)

Safe Operating Area