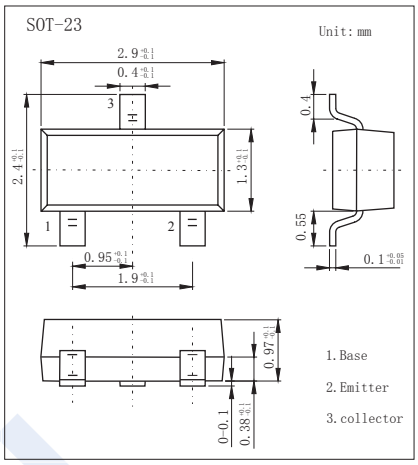
Power Darlington Transistors

FMMT634 (KMMT634)



■ Features

- Collector Current Capability I_C=0.9A
- Collector Emitter Voltage V_{CEO}=100V
- Complementary to FMMT734

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	120	V
Collector - Emitter Voltage	V_{CEO}	100	
Emitter - Base Voltage	V_{EBO}	12	
Collector Current - Continuous	I_C	0.9	A
Collector Current - Pulse	I_{CP}	5	
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

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■ 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	120			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA， I_B= 0	100			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A， I_C= 0	12			
Collector-base cut-off current	I_{CBO}	V_{CB}= 120 V , I_E= 0			100	nA
Collector- emitter cut-off current	I_{CES}	V_{CE}= 80 V , I_E= 0			100	
Emitter cut-off current	I_{EBO}	V_{EB}= 12V , I_C=0			100	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	I_C=100 mA, I_B=1mA			0.75	V
		I_C=250 mA, I_B=1mA			0.8	
		I_C=500 mA, I_B=5mA			0.85	
		I_C=900 mA, I_B=5mA			0.93	
		I_C=900 mA, I_B=5mA,T_J = 150℃		0.68		
		I_C=1 A, I_B=5mA			0.96	
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	I_C=1 A, I_B=5mA			1.65	
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	V_{CE}=5V, I_C= 1 A			1.5	
DC current gain (Note.1)	h_{FE}	V_{CE}=5V, I_C= 10mA		50K		
		V_{CE}=5V, I_C= 100mA	20K	60K		
		V_{CE}=5V, I_C= 1 A	15K	40K		
		V_{CE}=5V, I_C= 2 A	5K	14K		
		V_{CE}=5V, I_C= 5 A		600		
		V_{CE}=2V, I_C= 1 A		24K		
Turn-On Time	t_{on}	Ic=500mA Vcc=20V		290		nS
Turn-Off Time	t_{off}	I_B=±1mA		2.4		uS
Collector output capacitance	C_{ob}	V_{CB}= 10V, f=1MHz			20	pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 50mA,f=100MHz		140		MHz

Note.1 Pulse width=300us. Duty cycle ≤ 2%.

■ Marking

Marking	634

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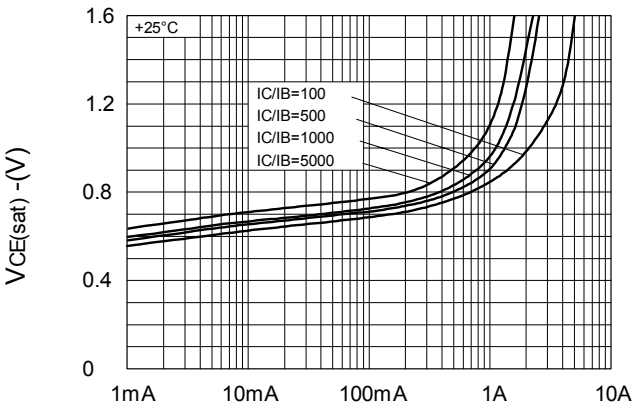
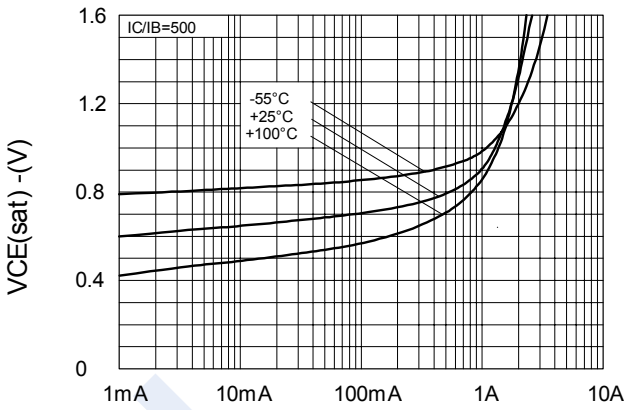
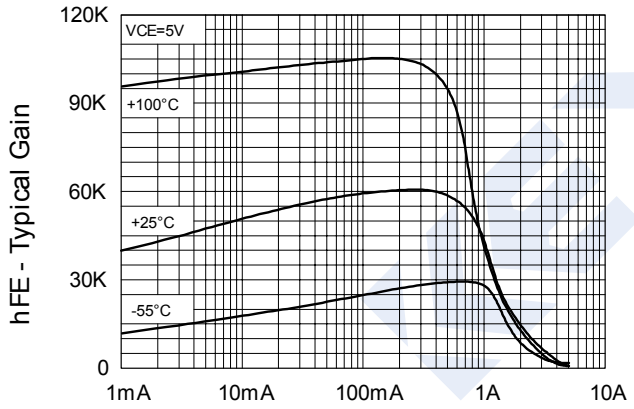
■ Typical Characterisitics



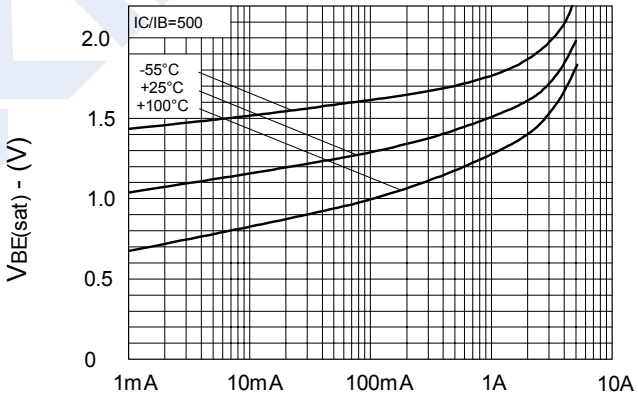
VCE(sat) v IC



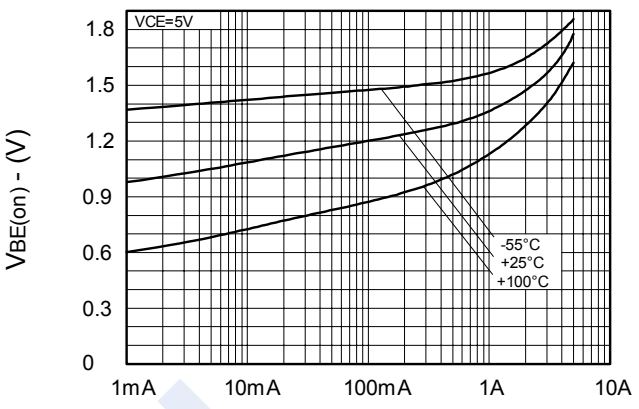
VCE(sat) v IC



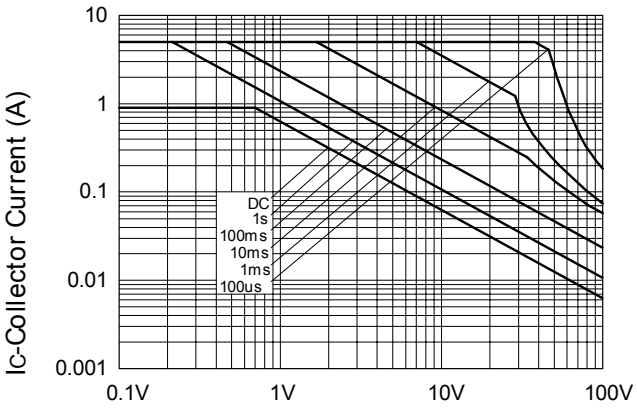
hFE V IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area