

High Voltage Transistor

FMMT458

■ Features

- 400 Volt V_{CE0}

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	400	V
Collector-emitter voltage	V_{CE0}	400	V
Emitter-base voltage	V_{EB0}	5	V
Peak collector current	I_{CM}	1	A
Collector current	I_C	225	mA
Base current	I_B	200	mA
Power dissipation	P_{tot}	500	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=320V$			100	nA
Collector Cut-Off Current	I_{CES}	$V_{CE}=320V$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$			100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA$			0.2	V
		$I_C=50mA, I_B=6mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$			0.9	V
Base-emitter turn on voltage	$V_{BE(on)}$	$I_C=50mA, V_{CE}=10V$			0.9	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C=1mA, V_{CE}=10V$	100			
		$I_C=50mA, V_{CE}=10V^*$	100		300	
		$I_C=100mA, V_{CE}=10V^*$	15			
Transition frequency	f_T	$I_C=10mA, V_{CE}=20V, f=20MHz$	50			MHz
Output capacitance	C_{obo}	$V_{CB}=20V, f=1MHz$			5	pF
Switching times	t_{on}	$I_C=50mA, V_{CC}=100V$		135		ns
	t_{off}	$I_{B1}=5mA, I_{B2}=-10mA$		2260		ns

■ Marking

Marking	458
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