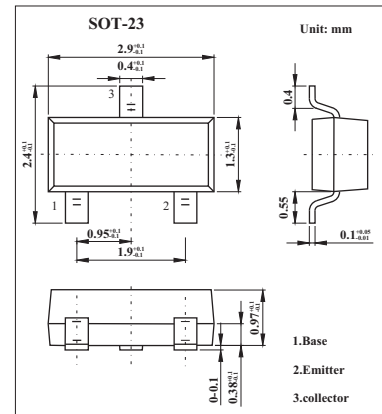


NPN Silicon Power Transistor

FMMT617TA

■ Features

- Power Dissipation: $P_{tot}=625mW$
- Collector Current: $I_c=3A$



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	15	V
Collector-Emitter Voltage	V_{CE0}	15	V
Emitter-Base Voltage	V_{EB0}	5	V
Continuous Collector Current	I_c	3	A
Peak Pulse Current *1	I_{CM}	12	A
Power Dissipation at $T_{amb} = 25^{\circ}C$ *2	P_{tot}	625	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

*1. Measured under pulsed conditions. Pulse width=300ms. Duty cycle $\leq 2\%$

*2. Maximum power dissipation is calculated assuming that the device is mounted on a ceramic substrate measuring 15x15x0.6mm

FMMT617TA

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA	15			V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =10mA*	15			V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =100μA	5			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =10V			100	nA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V			100	nA
Collector Emitter Cut-Off Current	I _{CES}	V _{CE} =10V			100	nA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =0.1A, I _B =10mA*		8	14	mV
		I _C =1A, I _B =10mA*		70	100	mV
		I _C =3A, I _B =50mA*		150	200	mV
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =3A, I _B =50mA*		0.9	1.0	V
Base-Emitter Turn-On Voltage	V _{BE(om)}	I _C =3A, V _{CE} =2V*		0.84	1.0	V
Static Forward Current Transfer Ratio	h _{FE}	I _C =10mA, V _{CE} =2V*	200	415		
		I _C =200mA, V _{CE} =2V*	300	450		
		I _C =3A, V _{CE} =2V*	200	320		
		I _C =5A, V _{CE} =2V*	150	240		
		I _C =12A, V _{CE} =2V*		80		
Transition Frequency	f _T	I _C =50mA, V _{CE} =10V, f=50MHz	80	120		MHz
Output Capacitance	C _{obo}	V _{CB} =10V, f=1MHz		30	40	pF
Turn-On Time	t _(on)	V _{CC} =10V, I _C =3A		120		ns
Turn-Off Time	t _(off)	I _{B1} =I _{B2} =50mA		160		ns

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%