



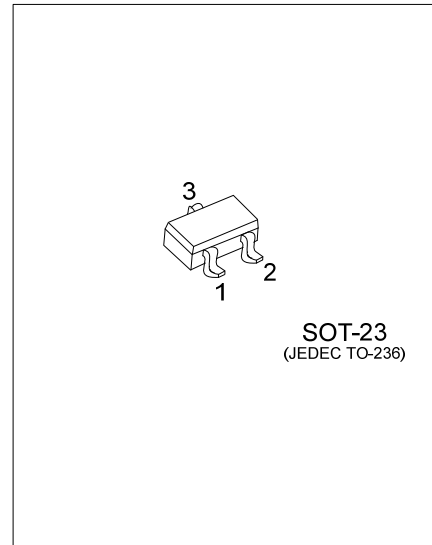
FMMT619

NPN SILICON TRANSISTOR

BIPOLAR POWER GENERAL PURPOSE TRANSISTOR

■ APPLICATIONS

- * DC-DC / DC-AC Modules
- * Regulator
- * LED driver
- * CCFL Backlighting Inverters



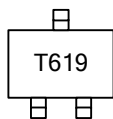
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
FMMT619G-AE3-6-R	FMMT619G-AE3-6-R	SOT-23	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

<p>FMMT619G-AE3-6-R</p> <p>(1) Packing Type (2) Pin Assignment (3) Package Type (4) Green Package</p>	<p>(1) R: Tape Reel (2) refer to Pin Assignment (3) AE3: SOT-23 (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



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■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	125	V
Collector-Emitter Voltage	V_{CEO}	125	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Collector Peak Current	$I_{C(PEAK)}$	3	A
Base Current	I_B	0.5	A
Power Dissipation	P_D	0.35	W
Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-40 ~ +150	$^{\circ}\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS

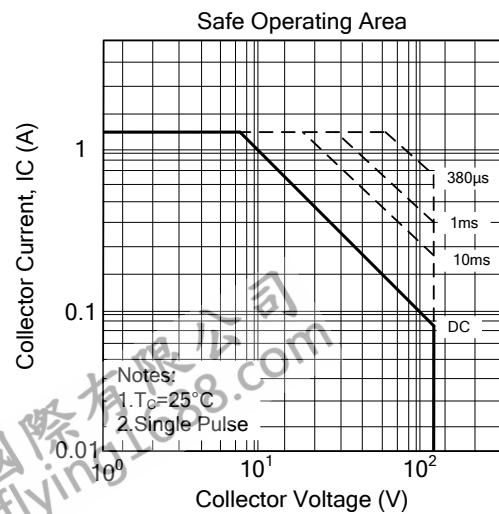
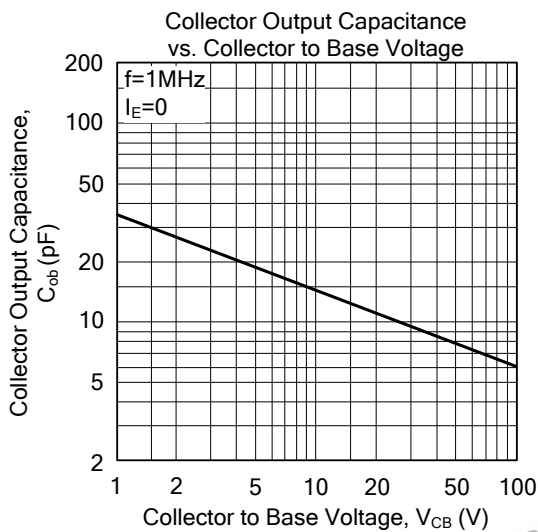
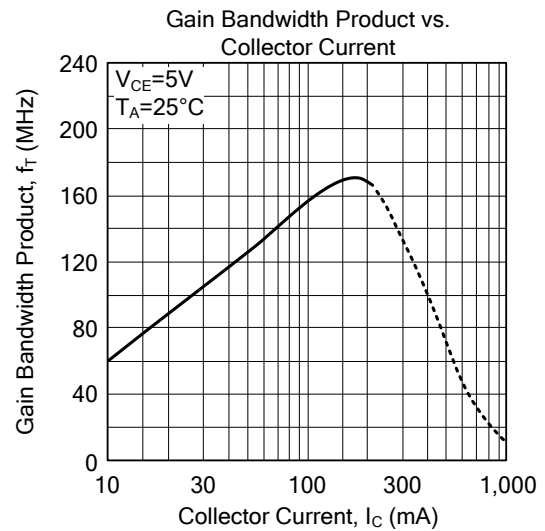
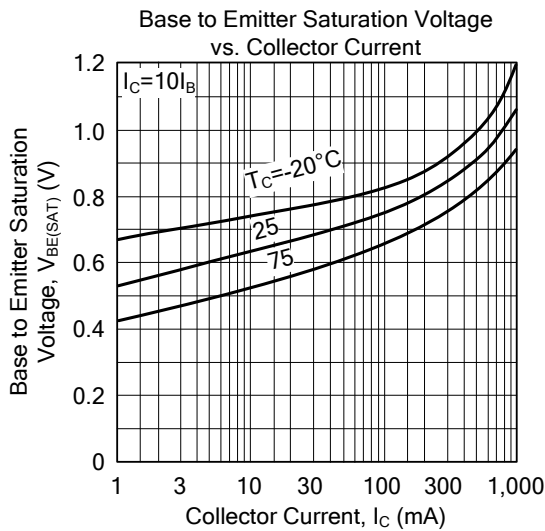
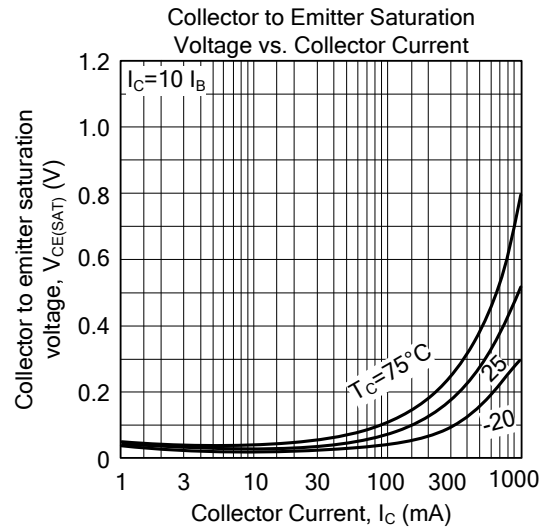
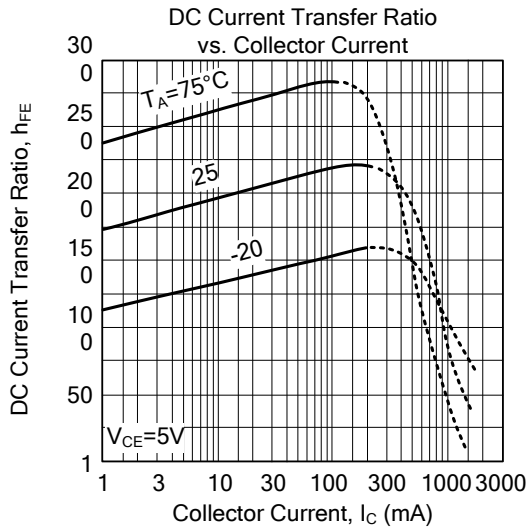
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	110	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

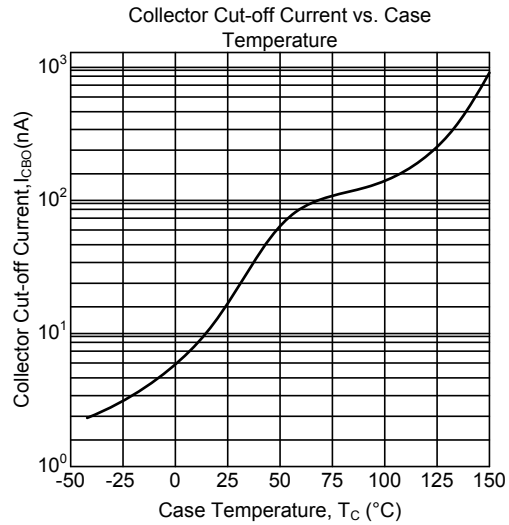
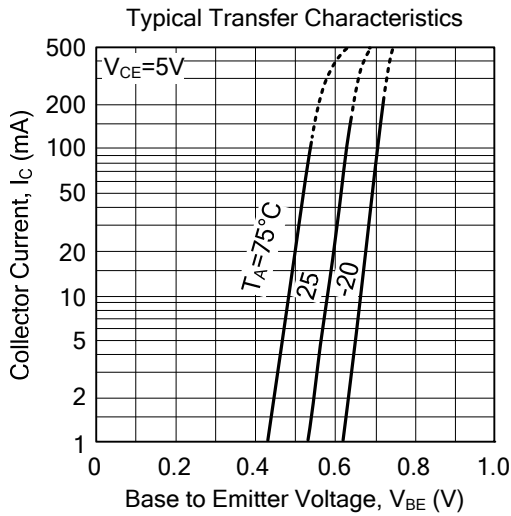
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector to Base Breakdown Voltage	BV_{CBO}	$I_C=1\text{mA}, I_E=0$	125			V
Collector to Emitter Breakdown Voltage	BV_{CEO}	$I_C=10\text{mA}, R_{BE}=\infty$	125			V
Emitter to Base Breakdown Voltage	BV_{EBO}	$I_E=1\text{mA}, I_C=0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=120\text{V}, I_E=0$			0.5	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
ON CHARACTERISTICS						
DC Current Gain	h_{FE1}	$V_{CE}=5\text{V}, I_C=150\text{mA}$ (Note)	160		320	
	h_{FE2}	$V_{CE}=5\text{V}, I_C=500\text{mA}$ (Note)	30			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$ (Note)			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=600\text{mA}, I_B=50\text{mA}$ (Note)			1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}, I_C=150\text{mA}$ (Note)			1.5	V
DYNAMIC CHARACTERISTICS						
Current Gain Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=150\text{mA}$ (Note)		140		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		14		pF
SWITCHING CHARACTERISTICS						
Rise Time	t_r	$V_{CC}=50\text{V}, I_C=0.5\text{A}, I_{B1}=I_{B2}=10\text{mA}, t_p=25\mu\text{s}, \text{Duty Cycle}\leq 1\%$		0.5		μs
Storage Time	t_s			1.5		
Fall Time	t_f			0.7		

Note: Pulse test.

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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