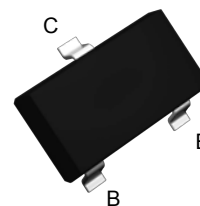


Features

- Low collector to emitter saturation voltage
- Excellent linearity of DC forward current gain
- Super mini package for easy mounting
- High collector current
- High gain band width product



SOT-23

Applications

- Small type motor drive, relay drive, power supply

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Max.	Unit
Collector-Base Voltage	V _{CBO}	25	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	0.7	A
Peak Pulse Collector Current	I _{CM}	1	A
Power Dissipation	P _{tot}	0.2	W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55 To +150	°C
Thermal Resistance from Junction to Ambient ¹	R _{θJA}	625	°C/W

Note:

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =10uA	25	-	-	V	
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =100uA	20	-	-	V	
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10uA	5	-	-	V	
Collector Cut-off Current	I _{CBO}	V _{CB} =25V	-	-	1	μA	
Emitter Cut-off Current	I _{EBO}	V _{EB} =2V	-	-	1	μA	
DC Current Gain	MMBT3440-A	h _{FE}	V _{CE} =4V, I _C =100mA	150	-	300	-
	MMBT3440-B	h _{FE}	V _{CE} =4V, I _C =100mA	250	-	500	-
	MMBT3440-C	h _{FE}	V _{CE} =4V, I _C =100mA	400	-	800	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =500mA, I _B =25mA	-	-	0.5	V	
Transition Frequency	f _T	V _{CE} =6V, I _C =10mA	-	180	-	MHz	

Typical Characteristic Curves

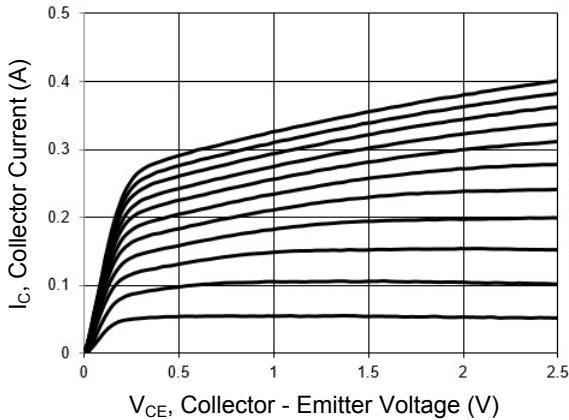


Figure 1. Output Characteristics Curve

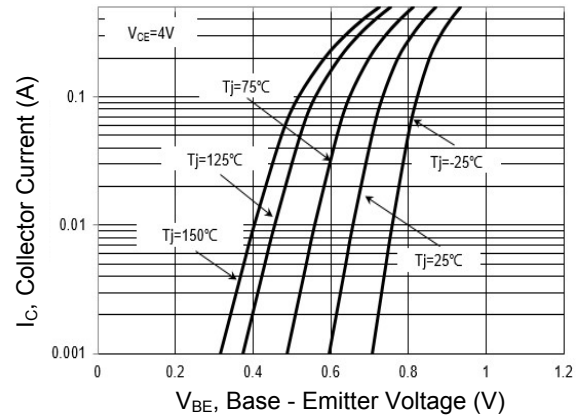


Figure 2. Collector Current vs. Base - Emitter Voltage

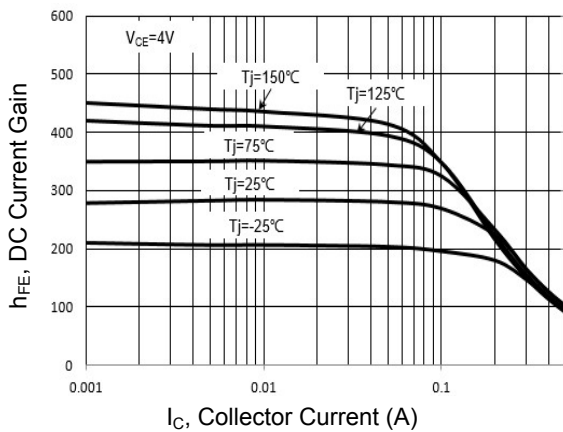


Figure 3. DC Current Gain vs. Collector Current

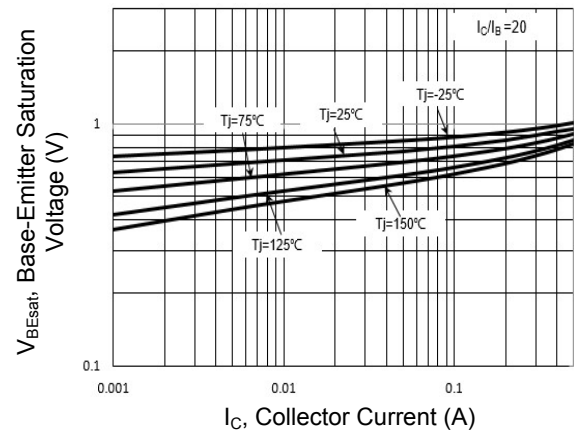


Figure 4. Base - Emitter Saturation Voltage vs. Collector Current

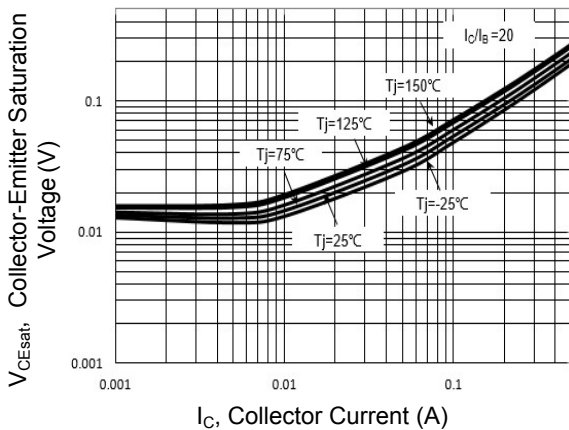


Figure 5. Collector - Emitter Saturation Voltage vs. Collector Current

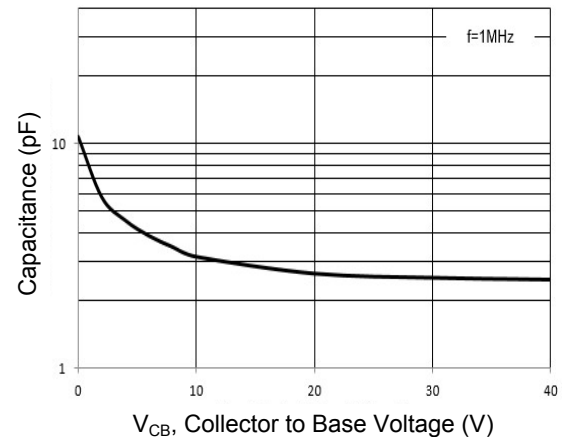


Figure 6. Output Capacitance

Typical Characteristic Curves

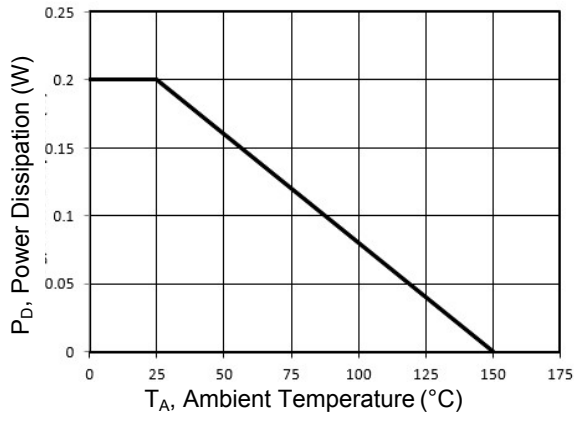
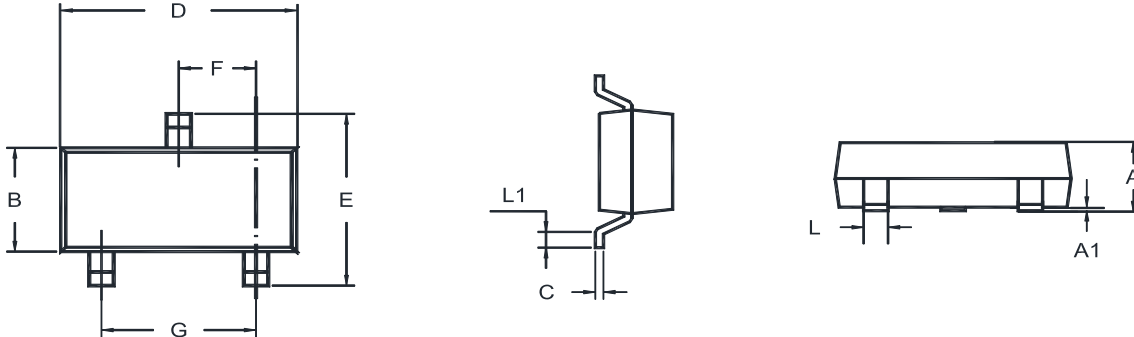


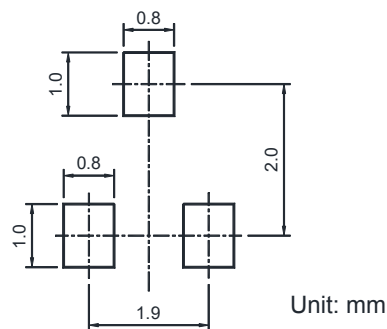
Figure 7. Power Derating Curve

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.890	1.200	0.035	0.047
A1	0.013	0.100	0.001	0.004
B	1.200	1.400	0.047	0.055
C	0.080	0.190	0.003	0.007
D	2.800	3.040	0.110	0.120
E	2.200	2.600	0.087	0.102
F	0.890	1.020	0.035	0.040
G	1.780	2.040	0.070	0.080
L	0.370	0.510	0.015	0.020
L1	0.200 Min		0.008 Min	

Recommended Pad Layout



Order Information

Device	Package	Marking	Quantity	HSF Status
MMBT3440-A	SOT-23	WV1	3,000 pcs / Reel	RoHS Compliant
MMBT3440-B	SOT-23	WW1	3,000 pcs / Reel	RoHS Compliant
MMBT3440-C	SOT-23	WX1	3,000 pcs / Reel	RoHS Compliant