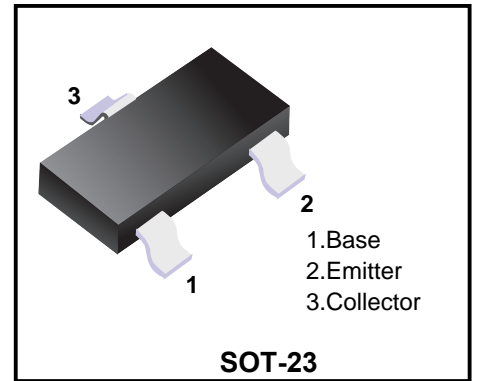


PNP Transistors



Features

- Collector Current Capability $I_c = -0.5A$
- Collector Emitter Voltage $V_{CE0} = -80V$

Marking Code	
MMBTA56	2GM

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-80	V
Collector - Emitter Voltage	V_{CEO}	-80	
Emitter - Base Voltage	V_{EBO}	-4	
Collector Current - Continuous	I_c	-0.5	A
Collector Power Dissipation	P_c	225	mW
Derate Above 25°C		1.8	mW/°C
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	556	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature range	T_{stg}	-55 to 150	

Electrical Characteristics (Ta=25°C unless otherwise specified.)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = -100 \mu A, I_E = 0$	-80			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c = -1 mA, I_B = 0$	-80			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu A, I_c = 0$	-4			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -80 V, I_E = 0$			-0.1	uA
Collector cut-off current	I_{CES}	$V_{CE} = -60 V, I_E = 0$			-0.1	
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_c = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -100 mA, I_B = -10mA$			-0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = -100 mA, I_B = -10mA$			-1.2	
Base - emitter on voltage	$V_{BE(on)}$	$V_{CE} = -1V, I_c = -100mA$			-1.2	
DC current gain	h_{FE}	$V_{CE} = -1V, I_c = -10mA$	100			
		$V_{CE} = -1V, I_c = -100mA$	100			
Transition frequency	f_T	$V_{CE} = -1V, I_c = -100mA, f = 100MHz$	50			MHz

Note. Pulse Test: Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2.0\%$.

Typical Characteristics

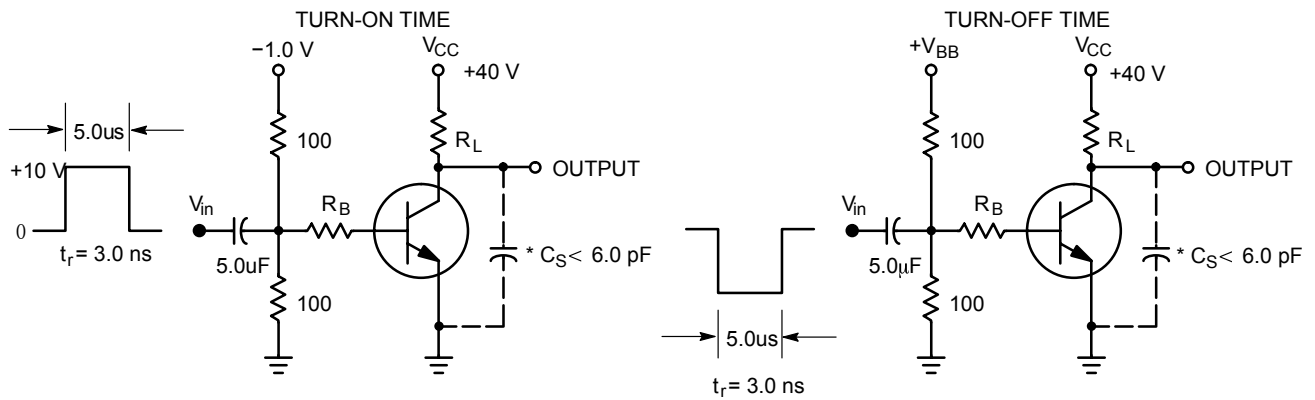


Figure 1. Switching Time Test Circuits

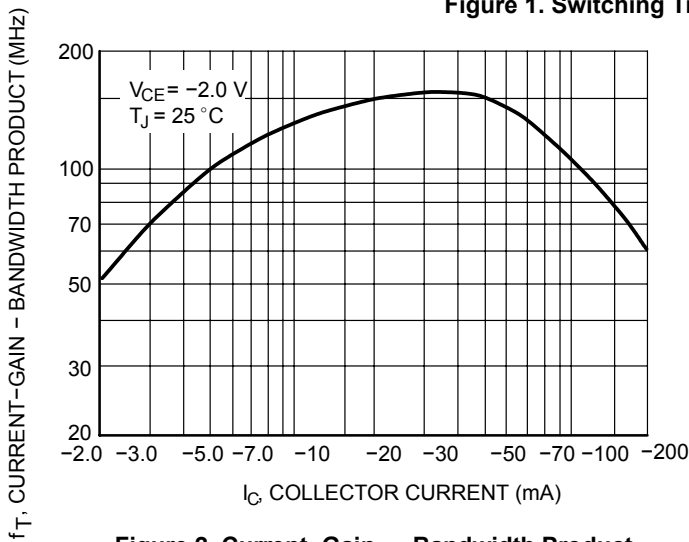


Figure 2. Current-Gain — Bandwidth Product

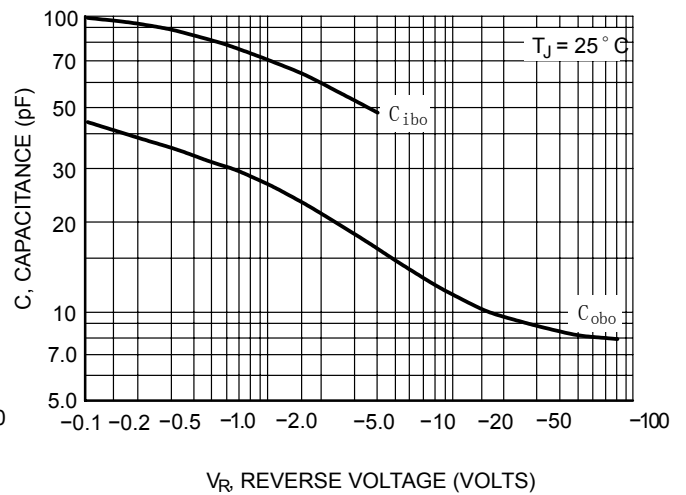


Figure 3. Capacitance

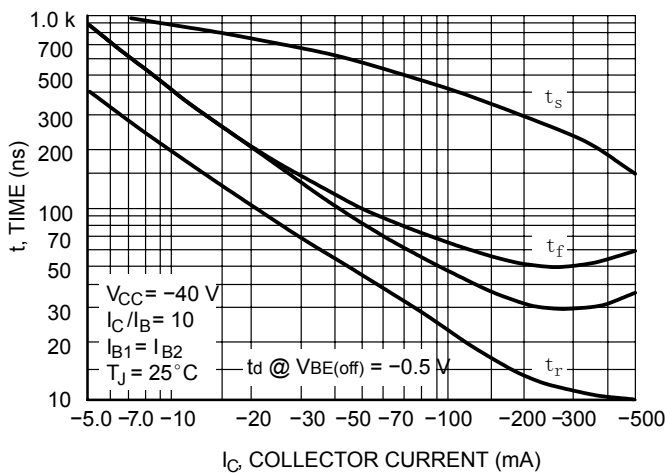


Figure 4. Switching Time

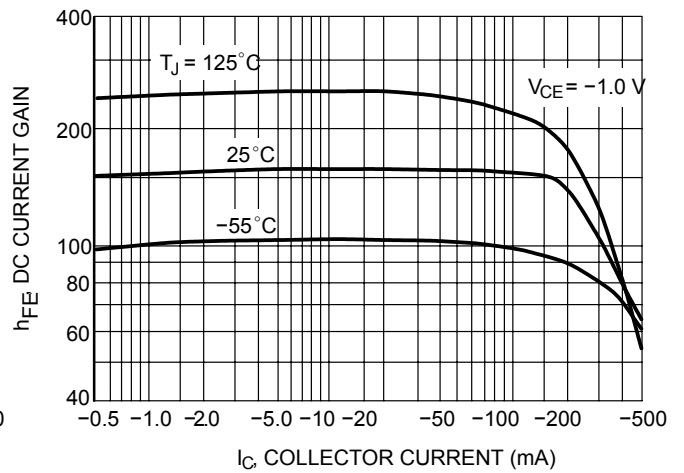


Figure 5. DC Current Gain

Typical Characteristics

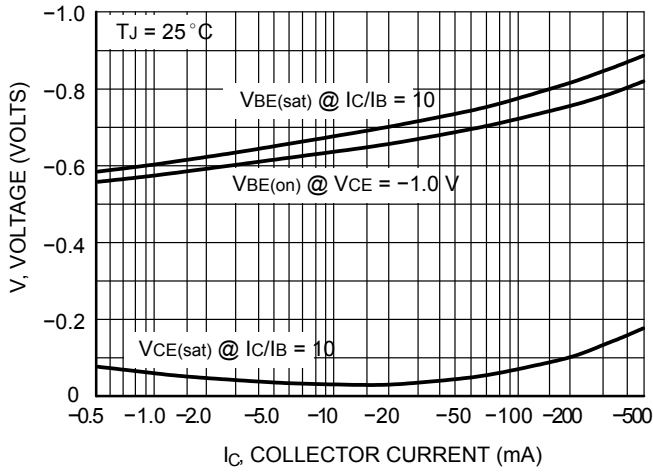


Figure 6. "ON" Voltages

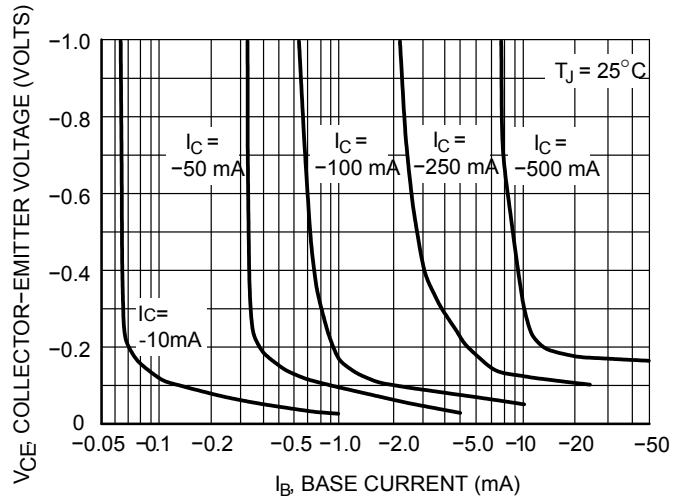


Figure 7. Collector Saturation Region

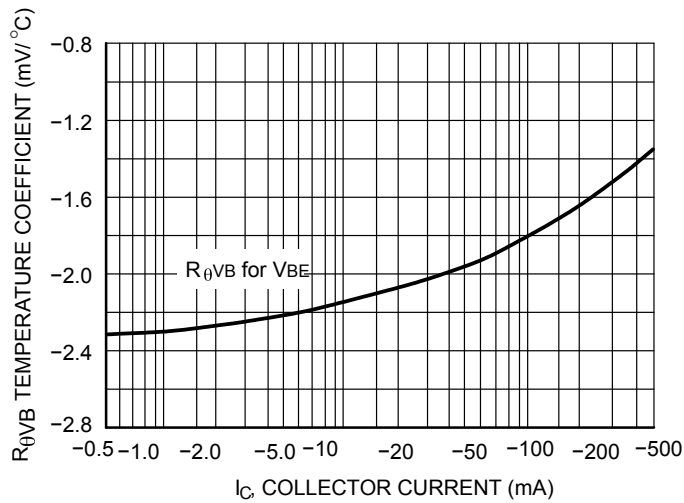


Figure 8. Base-Emitter Temperature Coefficient

Ordering information

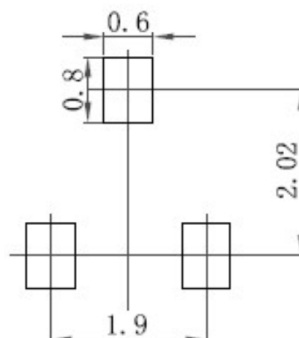
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices),YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.