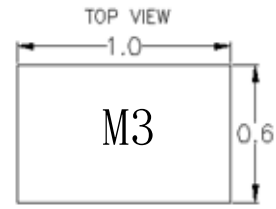
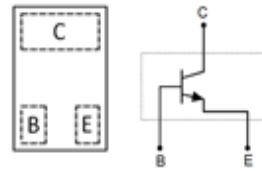
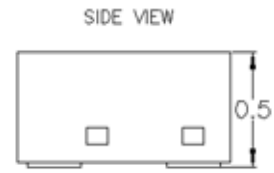
◇ NPN General Purpose Amplifier
◇ Capable of 250 mWatts of Power Dissipation
◇ Operating and Storage Junction Temperatures: -55℃ to 150℃
◇ Epoxy Meets UL 94 V-0 Flammability Rating
◇ RoHS compliant / Green EMC
◇ Device Marking Code

SOT883 Unit:mm



Circuit Diagram





Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	600	mA
I_{CM}	peak collector current	800	mA
I_{BM}	peak base current	200	mA
P_C	Collector Power Dissipation	250	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

Electrical Characteristics @ 25° C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
V_{CEO}	Collector-Emitter Breakdown Voltage	I_C=2mA, I_B=0	40			V
V_{CBO}	Collector-Base Breakdown Voltage	I_C=100μA, I_E=0	75			V
V_{EBO}	Emitter-Base Breakdown Voltage	I_E=100μA, I_C=0	6.0			V
I_{CBO}	Collector cut-off current	V_{CB}=60V, I_E=0			10	nA
I_{CEX}	Collector Cutoff Current	V_{CE}=60V, V_{BE}=3.0V			10	nA
I_{EBO}	emitter-base cut-off current	V_{EB} = 5 V; I_C = 0 A			10	nA

h_{FE}	DC Current Gain	I_C=0.1mA, V_{CE}=10V I_C=1.0mA, V_{CE}=10V I_C=10mA, V_{CE}=10V I_C=150mA, V_{CE}=10V I_C=150mA, V_{CE}=1.0V I_C=500mA, V_{CE}=10V	35 50 75 100 50 40		300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=150mA, I_B=15mA I_C=500mA, I_B=50mA			0.3 1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C=150mA, I_B=15mA I_C=500mA, I_B=50mA	0.6		1.2 2.0	V
f_T	Current Gain-Bandwidth Product	I_C=20mA, V_{CE}=20V, f=100MHz		300		MHZ
C_{ob}	Collector-Base Capacitance	V_{CB}=10V, I_E=0, f=1.0MHz			8.0	PF
C_{ib}	Emitter-Base Capacitance	V_{BE}=0.5V, IC=0, f=1.0MHz			25	PF

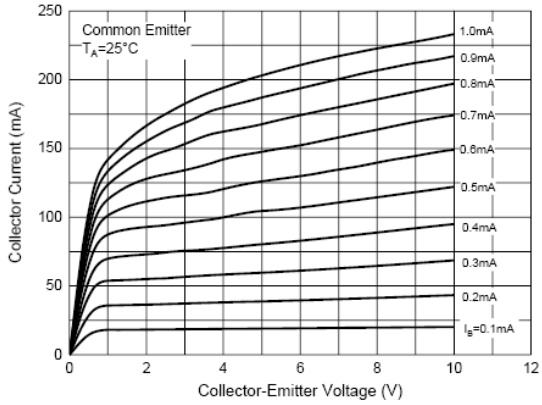
Switching Characteristics

Symbol	Parameter	Test Conditions	Min	Max	Units
td	Delay Time	V_{CC}=30V, V_{BE}=0.5V I_C=150mA, I_{B1}=15mA		10	ns
tr	Rise Time			25	ns
ts	Storage Time	V_{CC}=30V, I_C=150mA I_{B1}=I_{B2}=15mA		225	ns
tf	Fall Time			60	ns

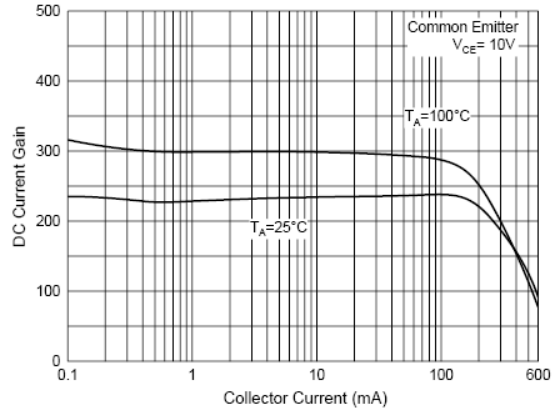
Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
PMBT2222AM	SOT883	Tape & Reel 10000pcs /7" Reel	8mm	4mm	Conductive	

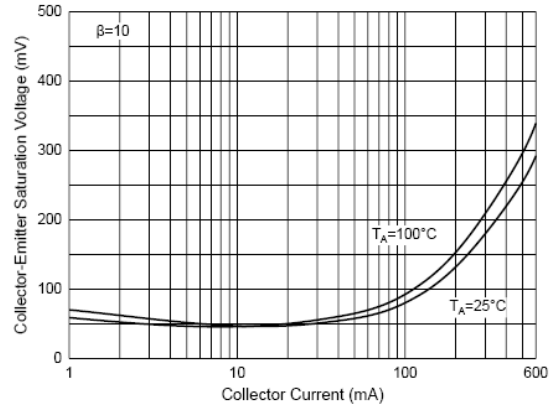
Typical Characteristics



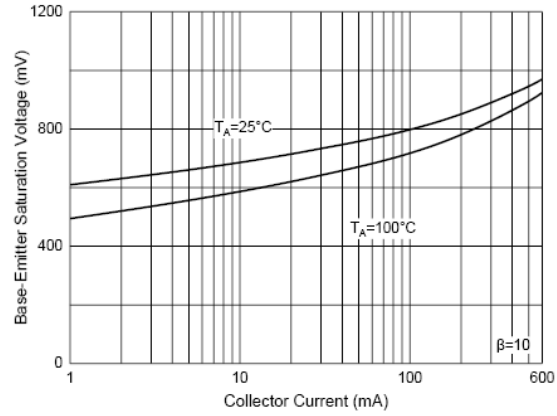
Static Characteristics



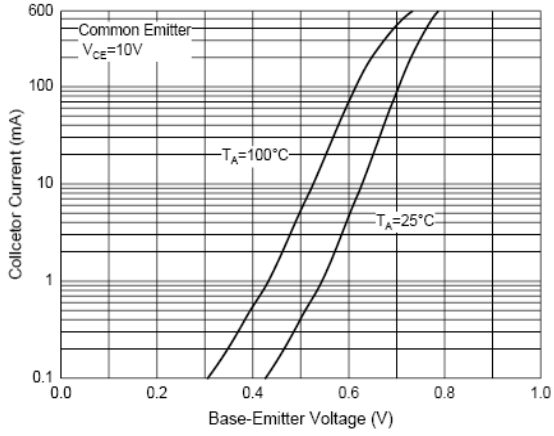
DC Current Gain Characteristics



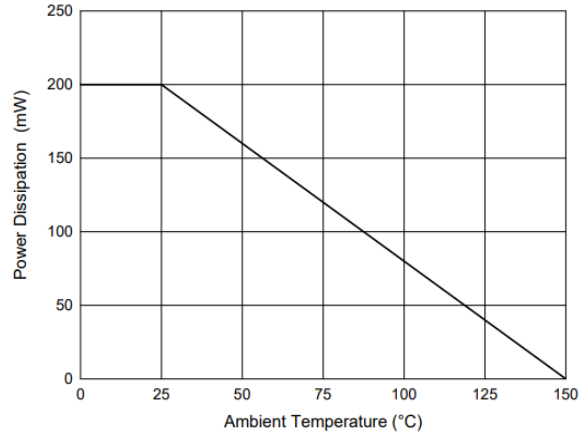
Collector-Emitter Saturation Voltage



Base-Emitter Saturation Voltage

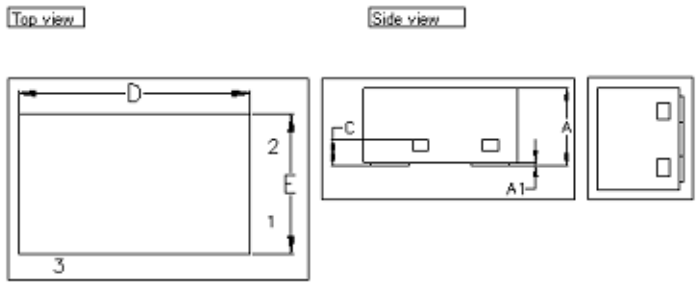


Base-Emitter Voltage Characteristics

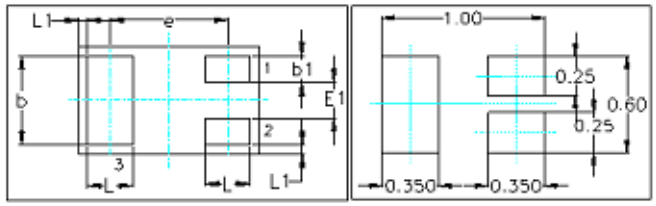


Collector Power Derating Curve

Package Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.025	0.05
b	0.45	0.50	0.55
b1	0.10	0.15	0.20
C	0.12	0.15	0.18
D	0.95	1.00	1.05
E	0.55	0.60	0.65
E1	0.15	0.20	0.25
e		0.65BSC	
L	0.20	0.25	0.30
L1		0.05 REF.	



Notice:

1.Lead plating: Pb free solder
2.Lead thickness includes solder plating
3.Other Tolerance: ± 0.05
4.Dimensions are exclusive of Burrs/Mold Flash and Tie Bar extrusions
5.Unit: mm