

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead free

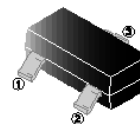
FEATURES

- Small Surface Mount Package
- Complementary to MMDT4403-C

SOT-323

MARKING

K3X

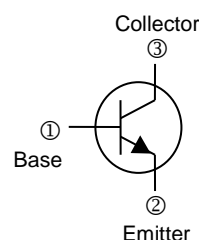


PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch

ORDER INFORMATION

Part Number	Type
MMBT4401W-C	Lead (Pb)-free and Halogen-free



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

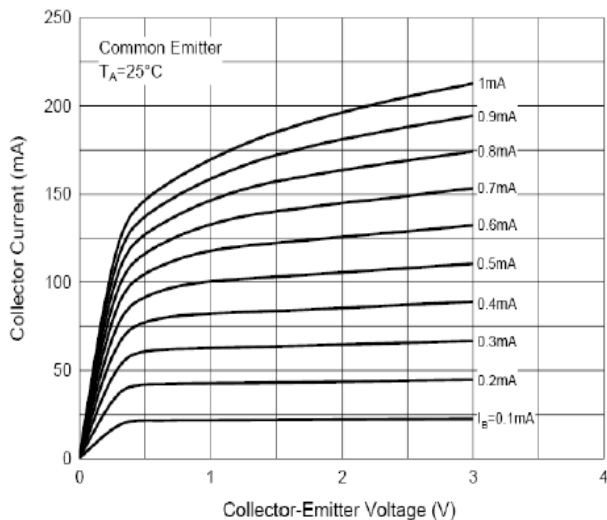
Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V _{CB0}	60	V
Collector-Emitter Voltage	V _{CEO}	40	
Emitter-Base Voltage	V _{EBO}	6	
Collector Current	I _C	600	mA
Collector Power Dissipation	P _C	200	mW
Thermal Resistance from Junction-Ambient	R _{θJA}	625	°C/W
Junction, Storage Temperature Range	T _J , T _{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

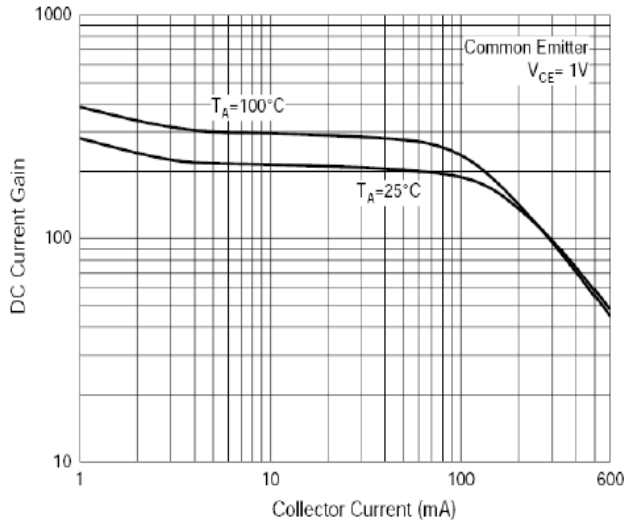
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60	-	-	V	I _C =100μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	40	-	-		I _C =1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	6	-	-		I _E =100μA, I _C =0
Collector Cut-off Current	I _{CBO}	-	-	100	nA	V _{CB} =35V, I _E =0
Collector Cut-off Current	I _{CEO}	-	-	100		V _{CE} =35V, I _B =0
Emitter Cut-off Current	I _{EBO}	-	-	100		V _{EB} =5V, I _C =0
DC Current Gain	h _{FE}	100	-	300		I _C =150mA, V _{CE} =1V
		40	-	-		I _C =500mA, V _{CE} =2V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	-	-	0.4	V	I _C =150mA, I _B =15mA
Base-Emitter Saturation Voltage	V _{BE(sat)}	-	-	0.95		I _C =150mA, I _B =15mA
Transition Frequency	f _T	250	-	-	MHz	I _C =20mA, V _{CE} =10V, f=100MHz
Collector Output Capacitance	C _{ob}	-	6.5	-	pF	V _{CB} =10V, I _E =0, f=1MHz
Delay Time	t _d	-	15	-		V _{CC} =30V, V _{BE(off)} =2V, I _C =150μA, I _{B1} =15mA
Rise Time	t _r	-	20	-		
Storage Time	t _s	-	225	-		
Fall Time	t _f	-	30	-		

TYPICAL CHARACTERISTICS

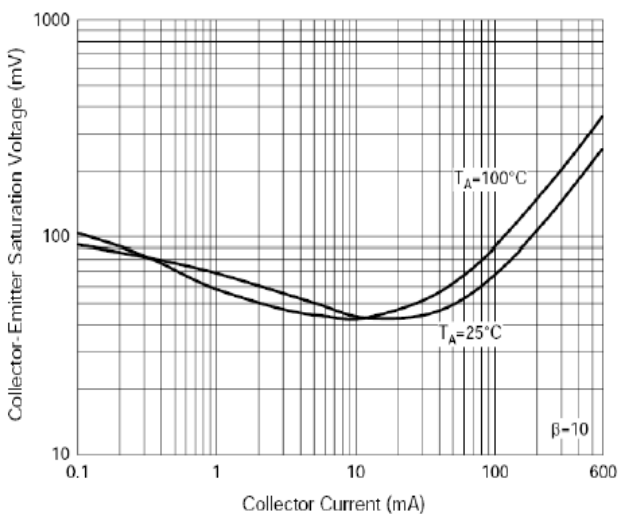
Static Characteristic



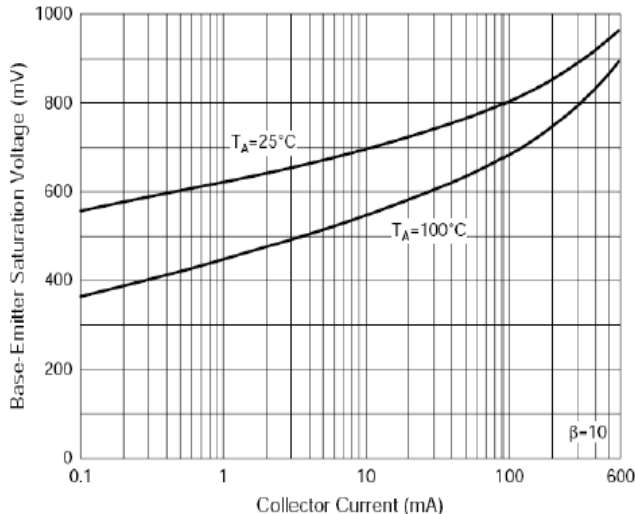
DC Current Gain Characteristics



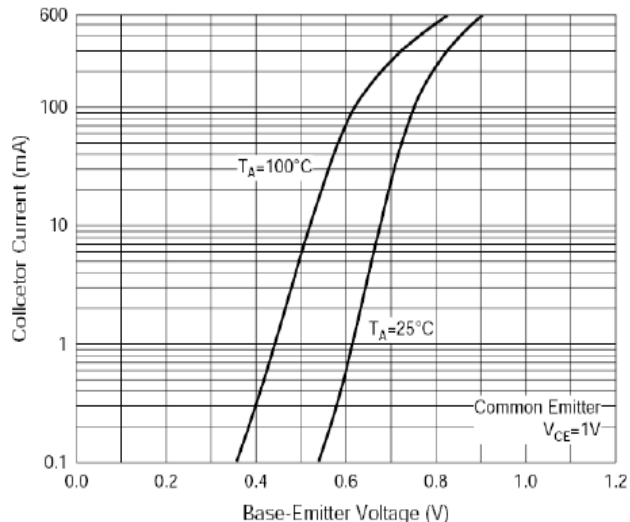
Collector-Emitter Saturation Voltage Characteristics



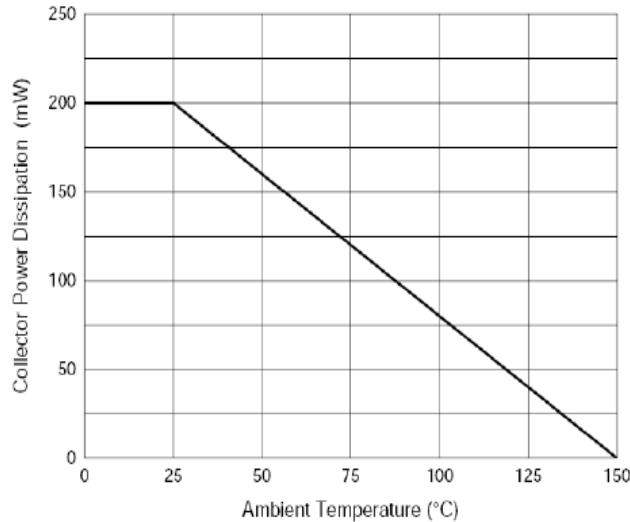
Base-Emitter Saturation Voltage Characteristics



Base-Emitter Voltage Characteristics

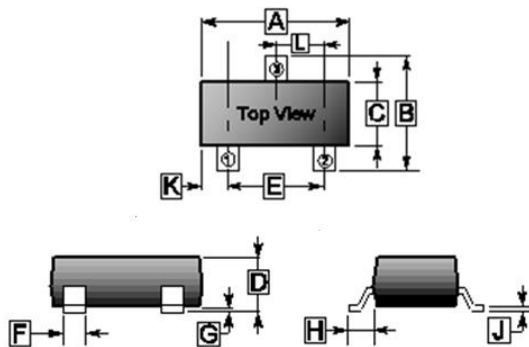


Collector Power Derating Curve



PACKAGE OUTLINE DIMENSIONS

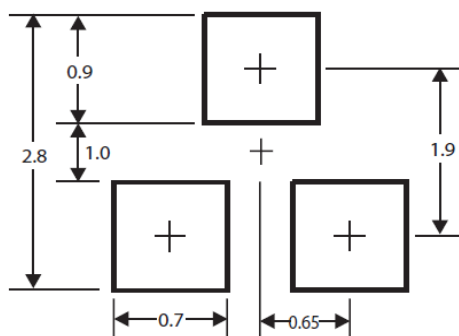
SOT-323



REF.	Millimeter	
	Min.	Max.
A	1.80	2.20
B	1.80	2.55
C	1.10	1.40
D	0.80	1.15
E	1.20	2.00
F	0.15	0.50
G	0.10 REF.	
H	0.525 REF.	
J	0.05	0.25
K	0.35 REF.	
L	0.65 TYP.	

MOUNTING PAD LAYOUT

SOT-323



*Dimensions in millimeters