

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 6)					
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-40	—	V	I _C = -100μA, I _E = 0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-40	—	V	I _C = -1.0mA, I _B = 0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5.0	—	V	I _E = -100μA, I _C = 0
Collector Cutoff Current	I _{CEX}	—	-100	nA	V _{CE} = -35V, V _{EB(OFF)} = -0.4V
Base Cutoff Current	I _{BL}	—	-100	nA	V _{CE} = -35V, V _{EB(OFF)} = -0.4V
ON CHARACTERISTICS (Note 6)					
DC Current Gain	h _{FE}	30 60 100 100 20	— — — 300 —	—	I _C = -100μA, V _{CE} = -1.0V I _C = -1.0mA, V _{CE} = -1.0V I _C = -10mA, V _{CE} = -1.0V I _C = -150mA, V _{CE} = -2.0V I _C = -500mA, V _{CE} = -2.0V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	—	-0.40 -0.75	V	I _C = -150mA, I _B = -15mA I _C = -500mA, I _B = -50mA
Base-Emitter Saturation Voltage	V _{BE(SAT)}	-0.75 —	-0.95 -1.30	V	I _C = -150mA, I _B = -15mA I _C = -500mA, I _B = -50mA
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C _{cb}	—	8.5	pF	V _{CB} = -10V, f = 1.0MHz, I _E = 0
Input Capacitance	C _{eb}	—	30	pF	V _{EB} = -0.5V, f = 1.0MHz, I _C = 0
Input Impedance	h _{ie}	1.5	15	kΩ	V _{CE} = -10V, I _C = -1.0mA, f = 1.0kHz
Voltage Feedback Ratio	h _{re}	0.1	8.0	× 10 ⁻⁴	
Small Signal Current Gain	h _{fe}	60	500	—	
Output Admittance	h _{oe}	1.0	100	μS	
Current Gain-Bandwidth Product	f _T	200	—	MHz	V _{CE} = -10V, I _C = -20mA, f = 100MHz
SWITCHING CHARACTERISTICS					
Delay Time	t _d	—	15	ns	V _{CC} = -30V, I _C = -150mA,
Rise Time	t _r	—	20	ns	V _{BE(off)} = -2.0V, I _{B1} = -15mA
Storage Time	t _s	—	225	ns	V _{CC} = -30V, I _C = -150mA,
Fall Time	t _f	—	30	ns	I _{B1} = I _{B2} = -15mA

Notes: 6. Short duration pulse test used to minimize self-heating effect.

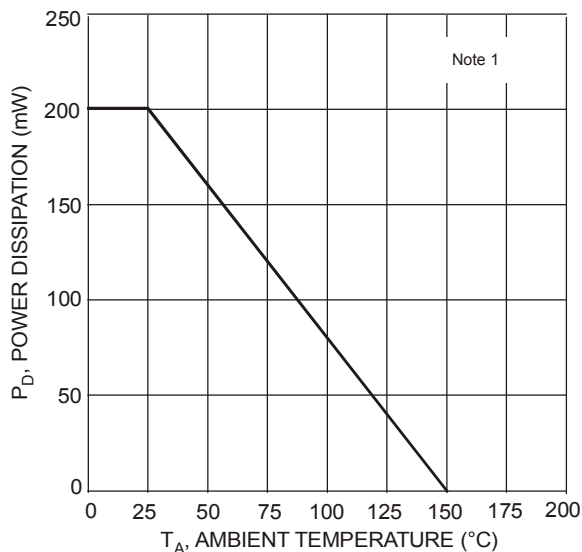


Fig. 1 Max Power Dissipation vs. Ambient Temperature

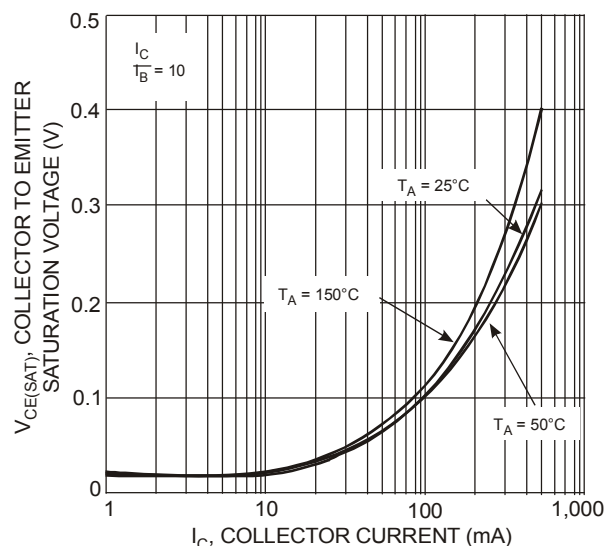


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

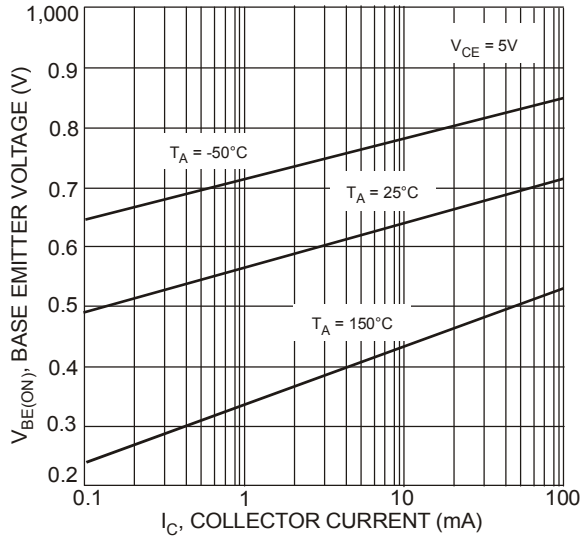


Fig. 3 Base-Emitter Voltage vs. Collector Current

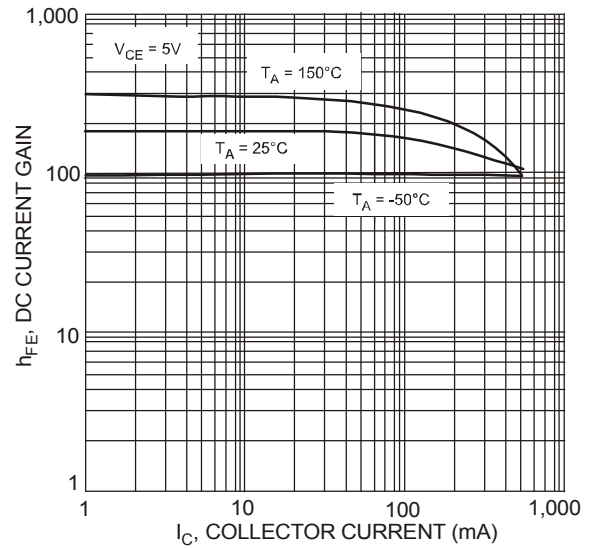


Fig. 4 DC Current Gain vs. Collector Current

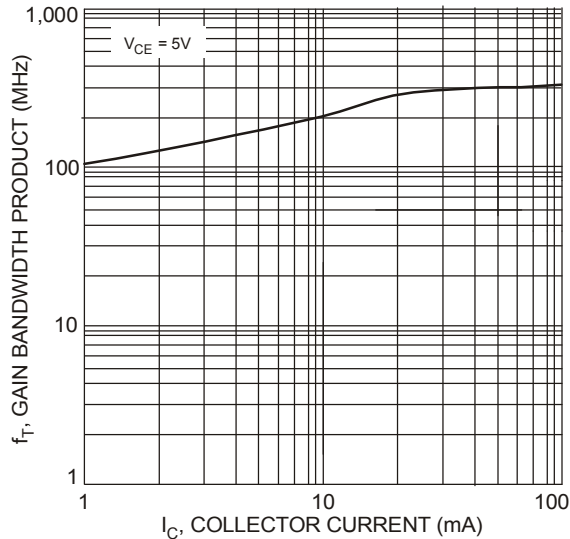


Fig. 5 Gain Bandwidth Product vs. Collector Current

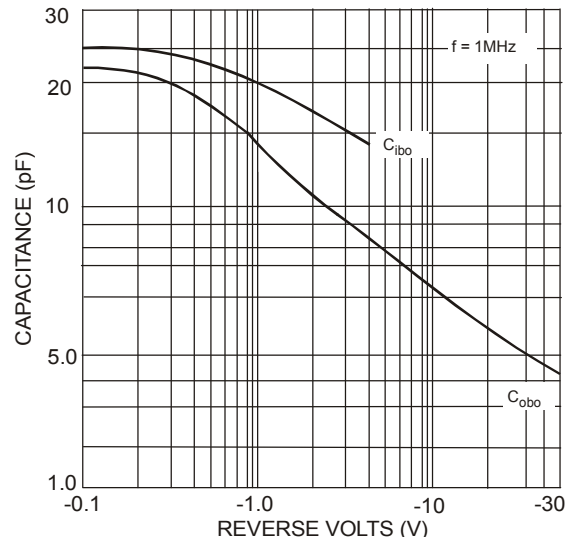


Fig. 6 Typical Capacitance

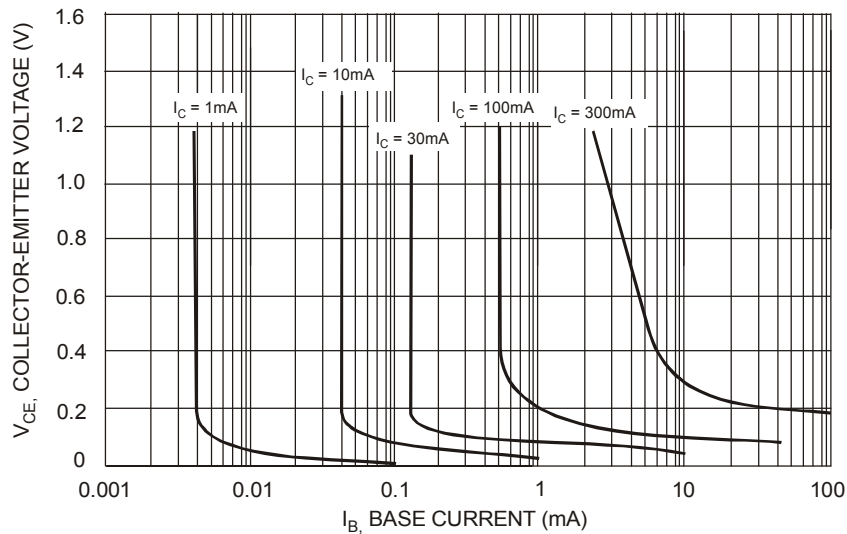


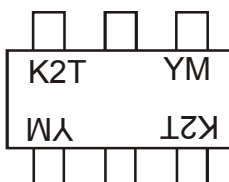
Fig. 7 Typical Collector Saturation Region

Ordering Information (Note 7)

Device	Packaging	Shipping
MMDT4403-7-F	SOT-363	3000/Tape & Reel

Notes: 7. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



K2T = Product Type Marking Code
YM = Date Code Marking
Y = Year ex: N = 2002
M = Month ex: 9 = September

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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