Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 5)						
Collector-Base Breakdown Voltage	MMSTA55 MMSTA56	$V_{(BR)CBO}$	-60 -80	—	V	I_C = -100μA, I_E = 0
Collector-Emitter Breakdown Voltage	MMSTA55 MMSTA56	$V_{(BR)CEO}$	-60 -80	—	V	I_C = -1.0mA, I_B = 0
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	-4.0	—	V	I_E = -100μA, I_C = 0
Collector Cutoff Current	MMSTA55 MMSTA56	I_{CBO}	—	-100	nA	V_{CB} = -60V, I_E = 0 V_{CB} = -80V, I_E = 0
Collector Cutoff Current	MMSTA55 MMSTA56	I_{CEX}	—	-100	nA	V_{CE} = -60V, I_{BO} = 0V V_{CE} = -80V, I_{BO} = 0V
ON CHARACTERISTICS (Note 5)						
DC Current Gain		h_{FE}	100	—	—	I_C = -10mA, V_{CE} = -1.0V I_C = -100mA, V_{CE} = -1.0V
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	—	-0.25	V	I_C = -100mA, I_B = -10mA
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	—	-1.2	V	I_C = -100mA, V_{CE} = -1.0V
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product		f_T	50	—	MHz	V_{CE} = -1.0V, I_C = -100mA, f = 100MHz

Notes: 5. Short duration pulse test used to minimize self-heating effect.

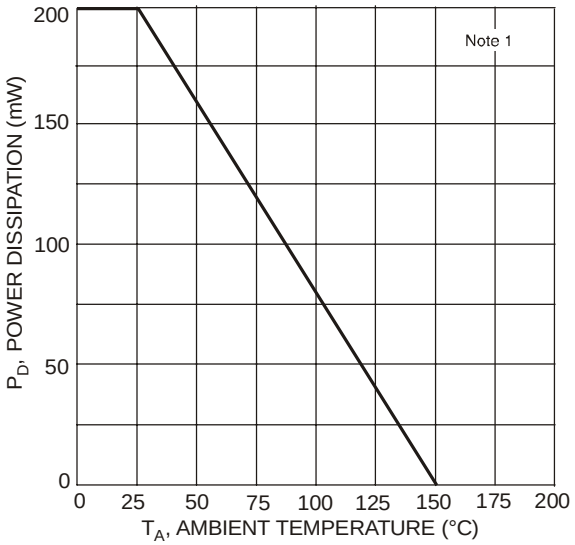


Fig. 1, Max Power Dissipation vs. Ambient Temperature

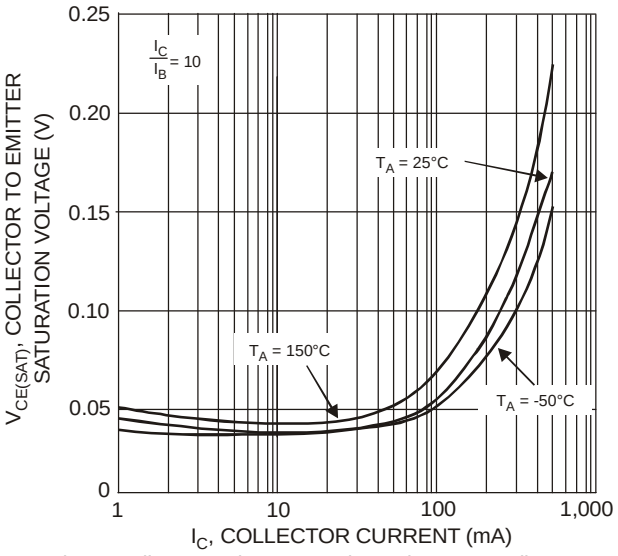


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

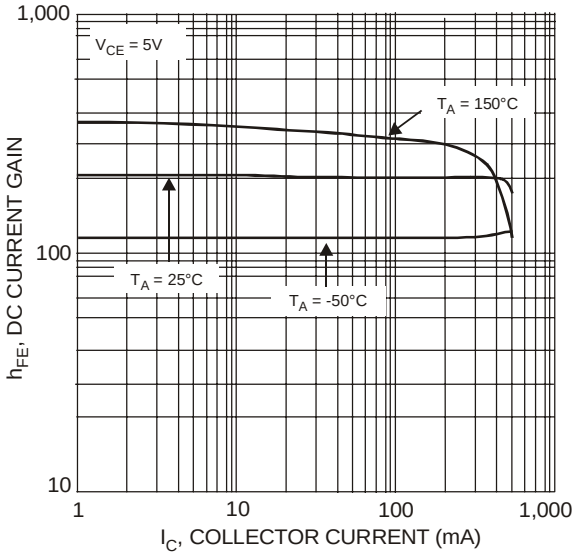


Fig. 3, DC Current Gain vs. Collector Current

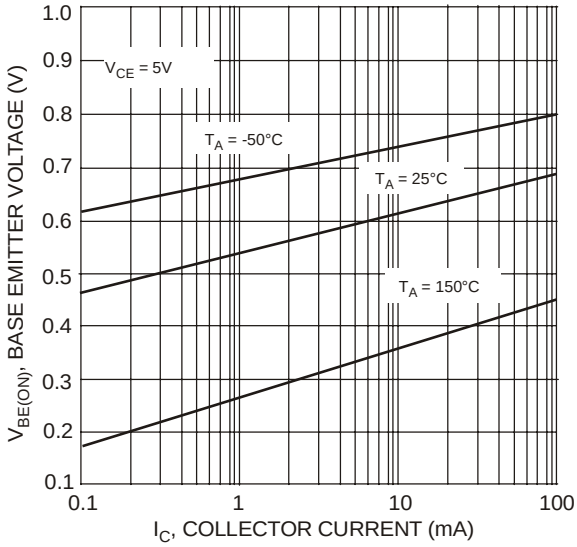


Fig. 4 Base Emitter Voltage vs. Collector Current

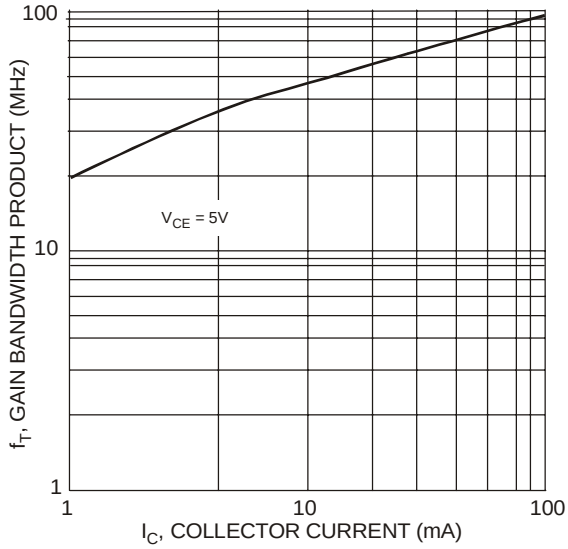


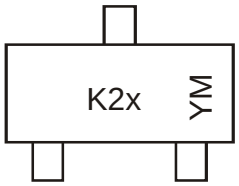
Fig. 5 Gain Bandwidth Product vs. Collector Current

Ordering Information (Notes 4 and 6)

Device	Packaging	Shipping
MMSTA55-7-F	SOT-323	3000/Tape & Reel
MMSTA56-7-F	SOT-323	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



K2x = Product Type Marking Code, e.g. K2H = MMSTA55
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