

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	$I_C = -100\mu A$, $I_E = 0$
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	$I_E = -100\mu A$, $I_C = 0$
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.

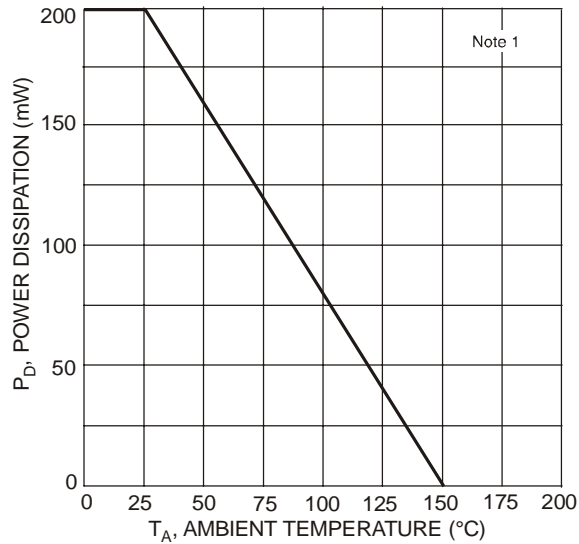


Fig. 1, Max Power Dissipation vs. Ambient Temperature

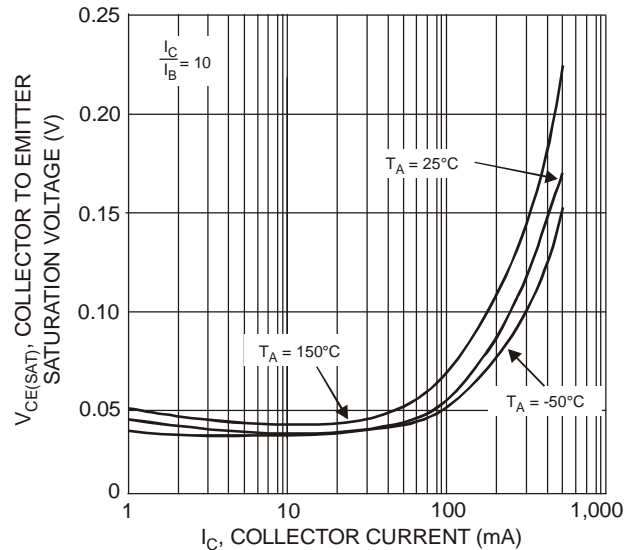


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

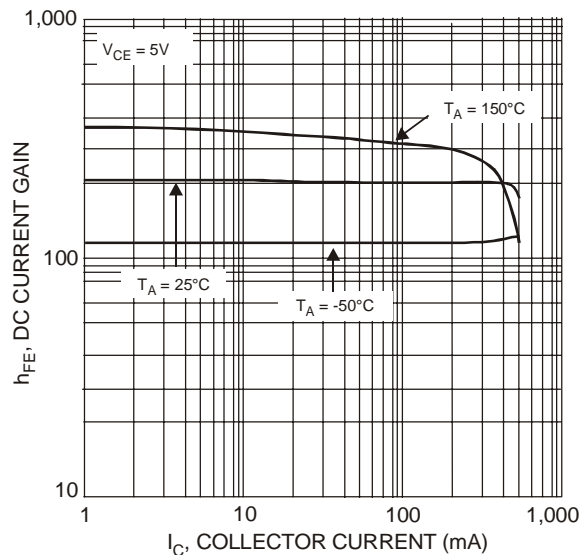


Fig. 3, DC Current Gain vs. Collector Current

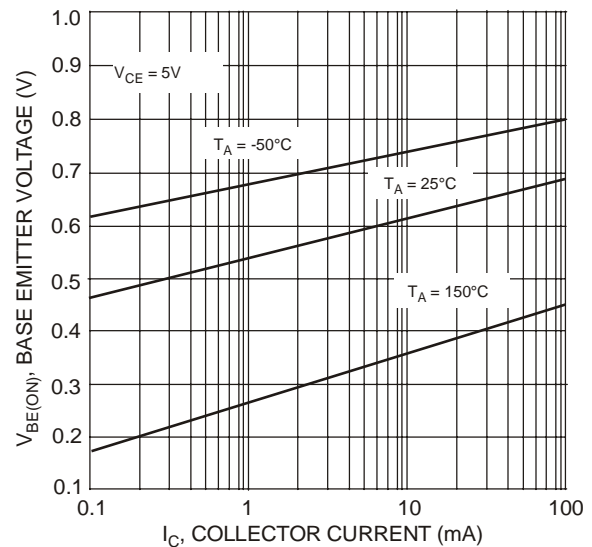
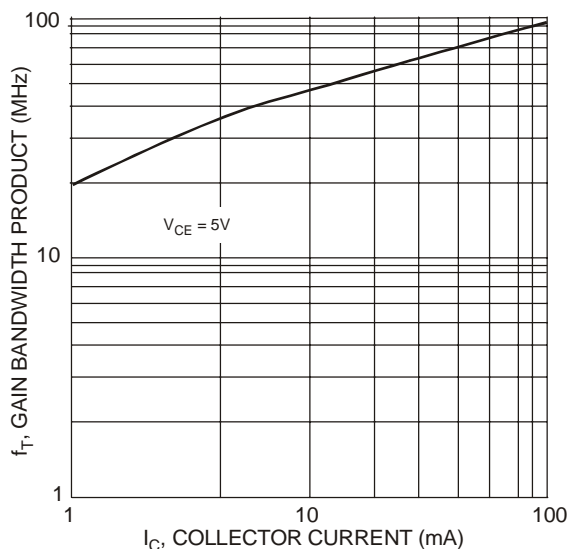


Fig. 4 Base Emitter Voltage vs. Collector Current

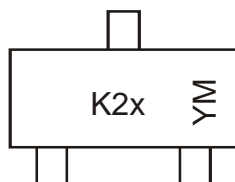


Ordering Information (Notes 4 and 6)

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

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