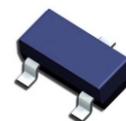


General Purpose Transistor

MMST2222A-G (NPN)

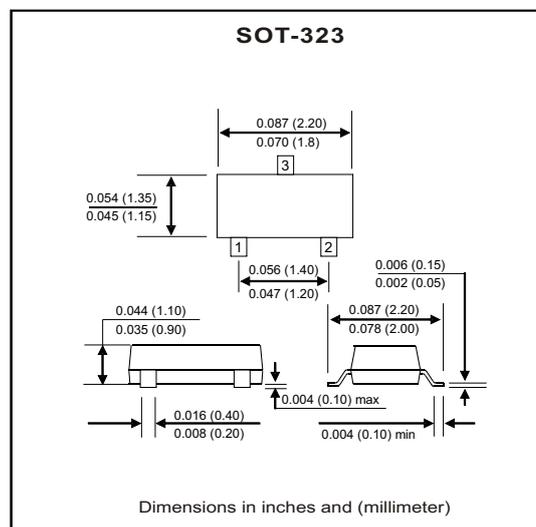
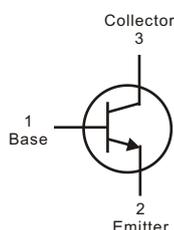
RoHS Device



Features

- Power dissipation
 $P_{CM} : 0.2W (T_A=25^{\circ}C)$
- Collector current
 $I_{CM} : 0.6A$
- Collector-base voltage
 $V_{(BR)CBO} : 75V$
- Operating and storage junction temperature range
 $T_J, T_{STG} : -55^{\circ}C \text{ to } +150^{\circ}C$

Marking: K3P



Electrical Characteristics (at $T_A=25^{\circ}C$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Max	Unit
Collector-Base breakdown voltage	$I_C = 10\mu A, I_E = 0$	$V_{(BR)CBO}$	75		V
Collector-Emitter breakdown voltage	$I_C = 10mA, I_B = 0$	$V_{(BR)CEO}$	40		V
Emitter-Base breakdown voltage	$I_E = 10\mu A, I_C = 0$	$V_{(BR)EBO}$	6		V
Collector cut-off current	$V_{CB} = 70V, I_E = 0$	I_{CBO}		0.1	μA
Collector cut-off current	$V_{CE} = 35V, I_B = 0$	I_{CEO}		0.1	μA
Emitter cut-off current	$V_{EB} = 3V, I_C = 0$	I_{EBO}		0.1	μA
DC current gain	$V_{CE} = 10V, I_C = 150mA$	$h_{FE(1)}$	100	300	
	$V_{CE} = 10V, I_C = 1mA$	$h_{FE(2)}$	50		
Collector-Emitter saturation voltage	$I_C = 500mA, I_B = 50mA$	$V_{CE(sat)}$		0.6	V
Base-Emitter saturation voltage	$I_C = 500mA, I_B = 50mA$	$V_{BE(sat)}$		1.2	V
Transition frequency	$V_{CE} = 20V, I_C = 20mA$ $f = 100MHz$	f_T	300		MHz
Output capacitance	$V_{CB} = 10V, I_E = 0$ $f = 1MHz$	C_{ob}		8	pF
Delay time	$V_{CC} = 30V, I_C = 150mA$ $V_{BE(off)} = 0.5V, I_{B1} = 15mA$	t_d		10	nS
Rise time		t_r		25	nS
Storage time	$V_{CC} = 30V, I_C = 150mA$ $I_{B1} = I_{B2} = 15mA$	t_s		225	nS
Fall time		t_f		60	nS

RATING AND CHARACTERISTIC CURVES (MMST2222A-G)

Fig.1 Grounded Emitter Output Characteristics

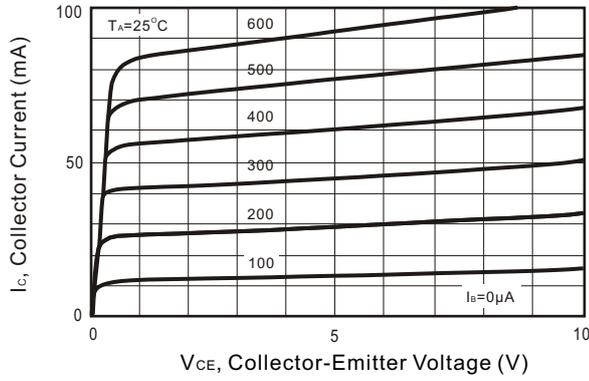


Fig.2 Collector-Emitter Saturation Voltage vs. Collector Current

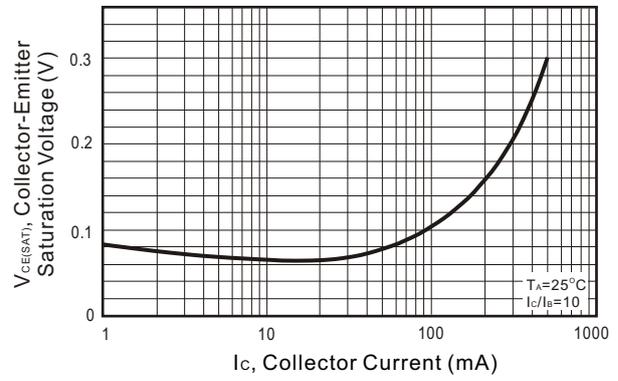


Fig.3 DC Current Gain vs. Collector Current

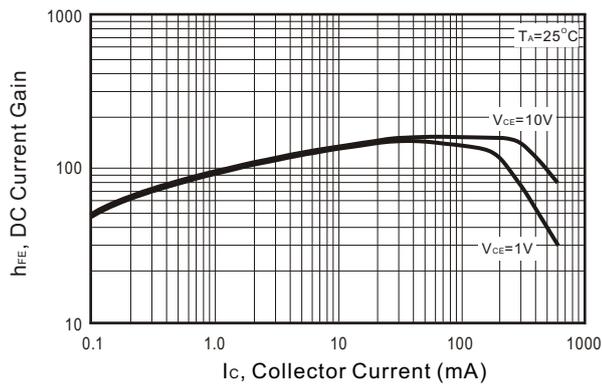


Fig.4 DC Current Gain vs. Collector Current

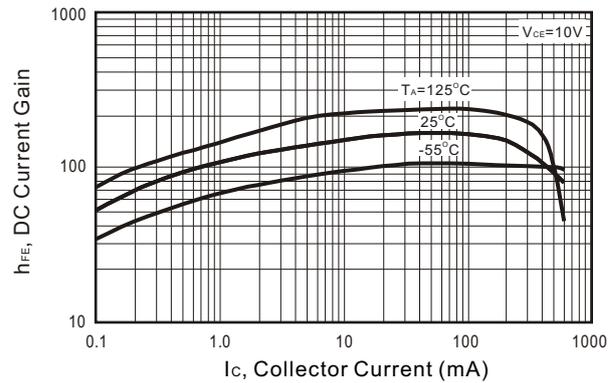


Fig.5 AC Current gain vs. Collector Current

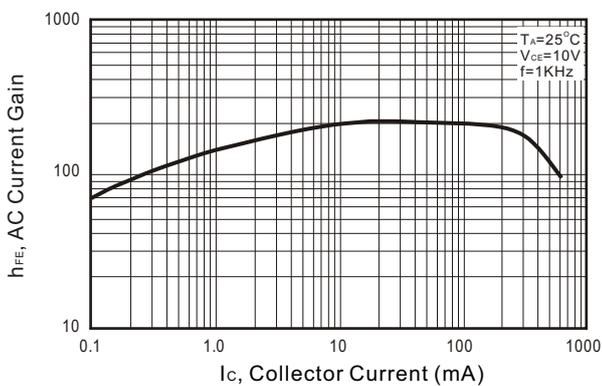
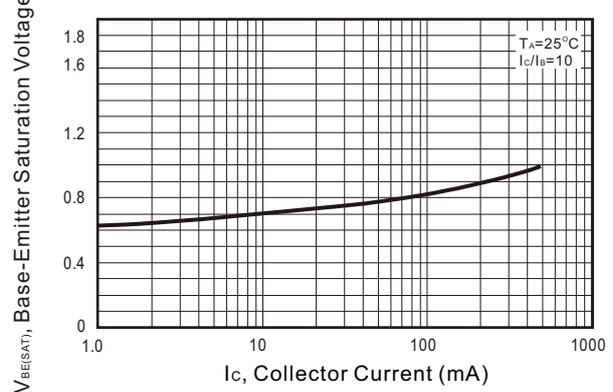


Fig.6 Base-Emitter Saturation Voltage vs. Collector Current



RATING AND CHARACTERISTIC CURVES (MMST2222A-G)

Fig.7 Grounded-Emitter Propagation Characteristics

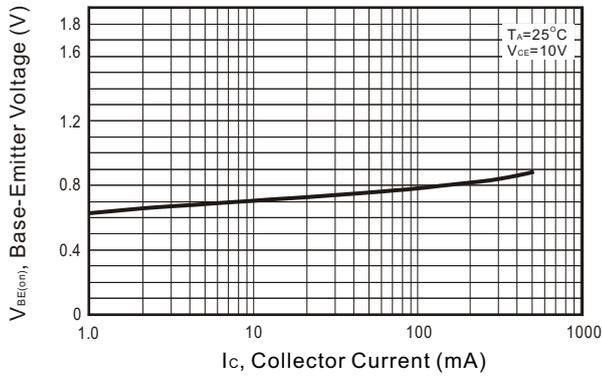


Fig.8 Turn-on time vs. Collector Current

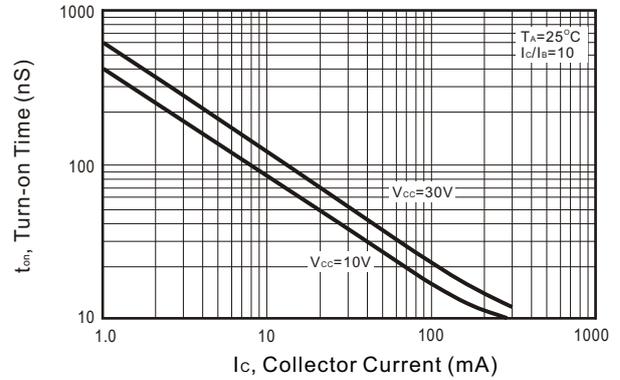


Fig.9 Rise Time vs. Collector Current

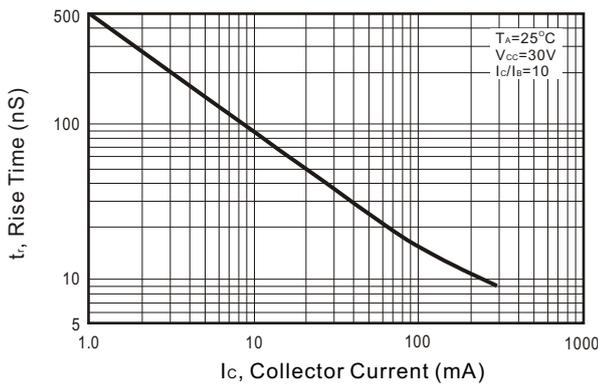


Fig.10 Storage Time vs. Collector Current

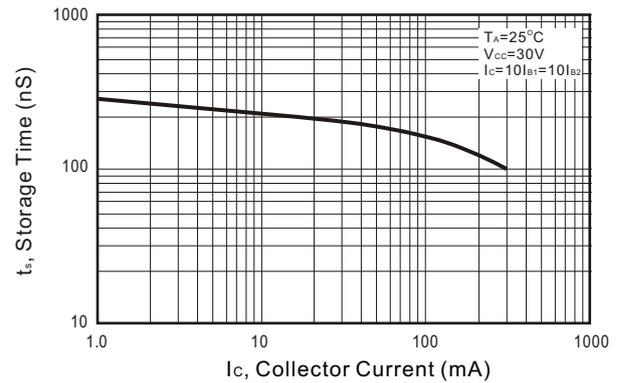


Fig.11 Fall Time vs. Collector Current

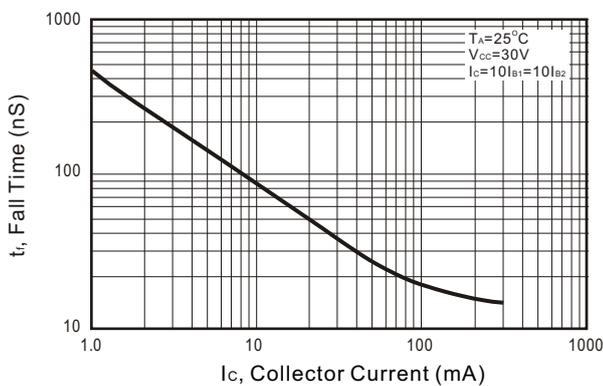
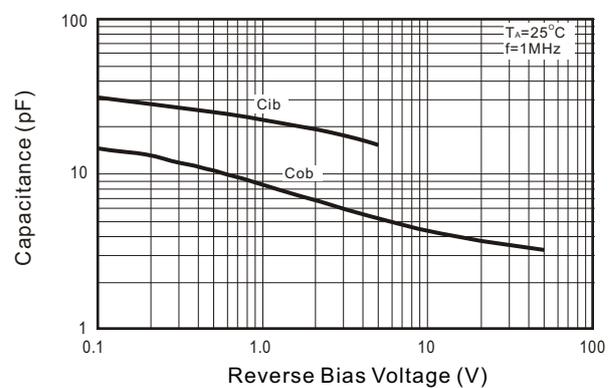


Fig.12 Input/Output Capacitance vs. Voltage



RATING AND CHARACTERISTIC CURVES (MMST2222A-G)

Fig.13 Gain Bandwidth Product

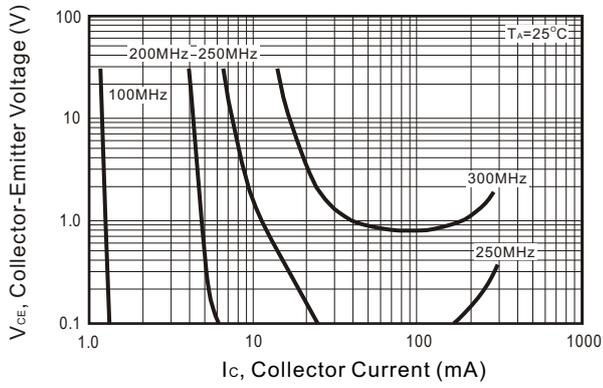


Fig.14 Gain Bandwidth product vs. Collector Current

