



## MMSS8050-L MMSS8050-H

### Features

- SOT-23 Plastic-Encapsulate Transistors
- Capable of 0.3Watts( $T_{amb}=25^{\circ}C$ ) of Power Dissipation.
- Collector-current 1.5A
- Collector-base Voltage 40V
- Operating and storage junction temperature range:  $-55^{\circ}C$  to  $+150^{\circ}C$
- Marking : Y1
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Halogen free available upon request by adding suffix "-HF"

### Electrical Characteristics @ $25^{\circ}C$ Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	40	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=0.1mA$ , $I_B=0$ )	25	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	5.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=40Vdc$ , $I_E=0$ )	---	0.1	$\mu A$
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=20Vdc$ , $I_B=0$ )	---	0.1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0Vdc$ , $I_C=0$ )	---	0.1	$\mu A$

### ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ( $I_C=100mA$ , $V_{CE}=1.0Vdc$ )	120	350	---
$h_{FE(2)}$	DC Current Gain ( $I_C=800mA$ , $V_{CE}=1.0Vdc$ )	40	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=800mA$ , $I_B=80mA$ )	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=800mA$ , $I_B=80mA$ )	---	1.2	Vdc
$V_{EB}$	Base- Emitter Voltage ( $I_E=1.5A$ )	---	1.6	Vdc

### SMALL-SIGNAL CHARACTERISTICS

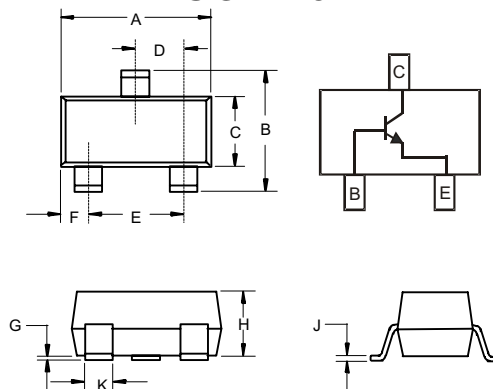
$f_T$	Transistor Frequency ( $I_C=50mA$ , $V_{CE}=10Vdc$ , $f=30MHz$ )	100	---	MHz
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### CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	120-200	200-350

## NPN Silicon Plastic-Encapsulate Transistor

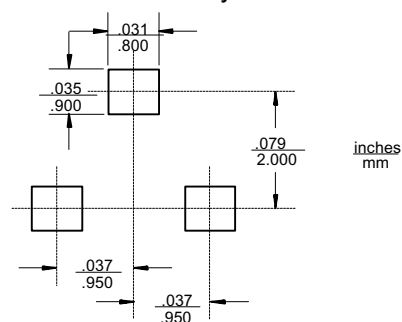
### SOT-23



#### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout



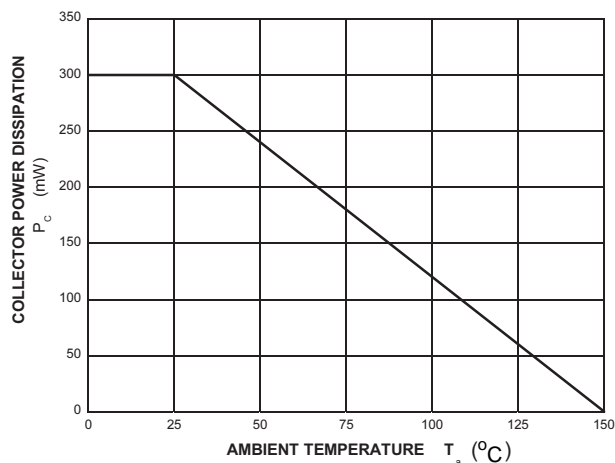


Figure1.Power Derating Curve

## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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