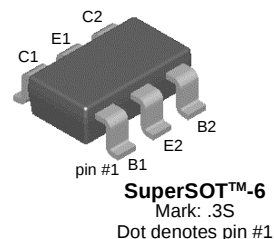


FMB5551

FMB5551

NPN General Purpose Amplifier SuperSOT-6 Surface Mount Package

- This device is designed for general purpose high voltage amplifiers and gas discharge display driving.
- Sourced from process 16.
- See MMBT5551 for characteristics.



Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	160	V
V_{CBO}	Collector-Base Voltage	180	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	600	mA
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$) *	0.7	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	- 55 ~ 150	$^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	180	$^\circ\text{C/W}$

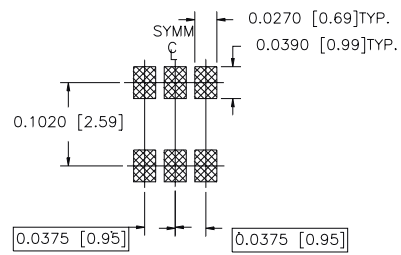
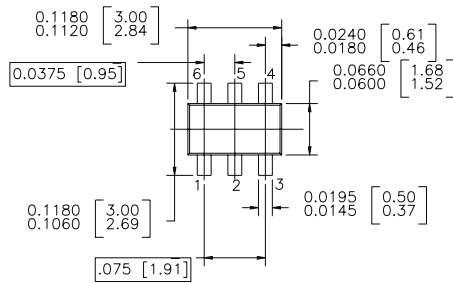
* P_d total, for both transistors. For each transistor, $P_d = 350\text{mW}$.

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
BV_{CEO}	Collector-Emitter Voltage	$I_C = 1\text{mA}$	160			V
BV_{CBO}	Collector-Base Voltage	$I_C = 10\mu\text{A}$	180			V
BV_{EBO}	Emitter-Base Voltage	$I_E = 10\mu\text{A}$	6			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 120\text{V}$ $V_{CB} = 120\text{V}, T = 100^\circ\text{C}$			50 50	nA μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 4\text{V}$			50	nA
On Characteristics						
h_{FE}	DC Current Gain	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$ $V_{CE} = 5\text{V}, I_C = 10\text{mA}$ $V_{CE} = 5\text{V}, I_C = 50\text{mA}$	80 80 30		250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 10\text{mA}, I_B = 1\text{mA}$ $I_C = 50\text{mA}, I_B = 5\text{mA}$			0.15 0.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 10\text{mA}, I_B = 1\text{mA}$ $I_C = 50\text{mA}, I_B = 5\text{mA}$			1 1	V
Small Signal Characteristics						
TYPICAL						
C_{ob}	Output Capacitance	$V_{CB} = 10\text{V}, f = 1\text{MHz}$			6	pF
C_{ib}	Input Capacitance	$V_{CB} = 0.5\text{V}, f = 1\text{MHz}$			20	pF
f_T	Current gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$ $f = 100\text{MHz}$	100		300	MHz
NF	Noise Figure	$V_{CE} = 5\text{V}, I_C = 200\mu\text{A}$ $f = 1\text{MHz}, R_S = 2\text{k}\Omega, B = 200\text{Hz}$			8	dB
h_{FE}	Small Signal Current Gain	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$ $f = 1\text{KHz}$	50		250	

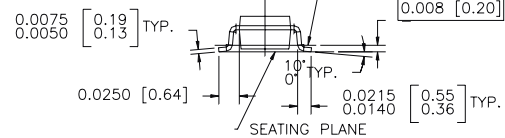
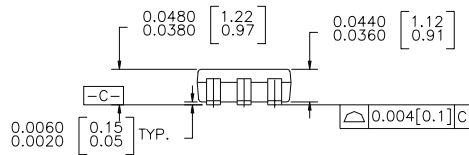
Package Dimensions

SuperSOT™-6



LAND PATTERN RECOMMENDATION

CONTROLLING DIMENSION IS INCH
VALUES IN [] ARE MILLIMETERS



NOTES : UNLESS OTHERWISE SPECIFIED

1.0 STANDARD LEAD FINISH : 150 MICROINCHES 93.81 MICROMETERS)
MINIMUM TIN / LEAD (SOLDER) ON COPPER.

2.0 NO JEDEC REGISTRATION AS OF JULY 1996

SUPER SOT 6 LEADS

Dimensions in Millimeters

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CoolFET™	FRFET™	MicroFET™	QFET [®]	SuperSOT™-8
CROSSVOLT™	GlobalOptoisolator™	MicroPak™	QS™	SyncFET™
DOME™	GTO™	MICROWIRE™	QT Optoelectronics™	TinyLogic [®]
EcoSPARK™	HiSeC™	MSX™	Quiet Series™	TINYOPTO™
E ² CMOS™	I ² C™	MSXPro™	RapidConfigure™	TruTranslation™
EnSigna™	i-Lo™	OCX™	RapidConnect™	UHC™
FACT™	ImpliedDisconnect™	OCXPro™	μSerDes™	UltraFET [®]
FACT Quiet Series™		OPTOLOGIC [®]	SILENT SWITCHER [®]	VCX™
Across the board. Around the world.™		OPTOPLANAR™	SMART START™	
The Power Franchise [®]		PACMAN™	SPM™	
Programmable Active Droop™		POP™	Stealth™	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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