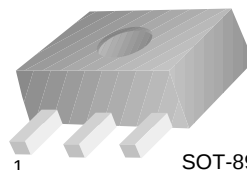


KSC2982

KSC2982

Strobe Flash & Medium Power Amplifier

- Excellent h_{FE} Linearity : $h_{FE1}=140 \sim 600$
- Low Collector-Emitter Saturation Voltage : $V_{CE(sat)}=0.5V$
- Collector Dissipation : $P_C=1\sim 2W$ in Mounted on Ceramic Board



1. Base 2. Collector 3. Emitter

NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CES}	Collector-Emitter Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter Base Voltage	6	V
I_C	Collector Current (DC)	2	A
I_{CP}	* Collector Current (Pulse)	4	A
I_B	Base Current (DC)	0.4	A
I_{BP}	* Base Current (Pulse)	0.8	A
P_C	Collector Power Dissipation	500	mW
P_C^*		1,000	mW
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ C$

* $PW \leq 10ms$, Duty Cycles $\leq 30\%$

Mounted on Ceramic Board (250mm² x 0.8mm)

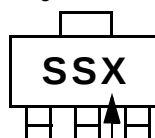
Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10mA$, $I_B=0$	10			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=1mA$, $I_C=0$	6			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=30V$, $I_E=0$			100	nA
I_{EBO}	Emitter Cut-off Current	$V_{BE}=6V$, $I_C=0$			100	nA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE}=1V$, $I_C=0.5A$ $V_{CE}=1V$, $I_C=2A$	140 70	140	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2A$, $I_B=50mA$		0.2	0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=1V$, $I_C=2A$		0.86	1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE}=1V$, $I_C=2A$		150		MHz
C_{ob}	Output Capacitance	$V_{CB}=10V$, $I_E=0$, $f=1MHz$		27		pF

h_{FE1} Classification

Classification	A	B	C	D
h_{FE1}	140 ~ 240	200 ~ 330	300 ~ 450	420 ~ 600

Marking



h_{FE} grade

Typical Characteristics

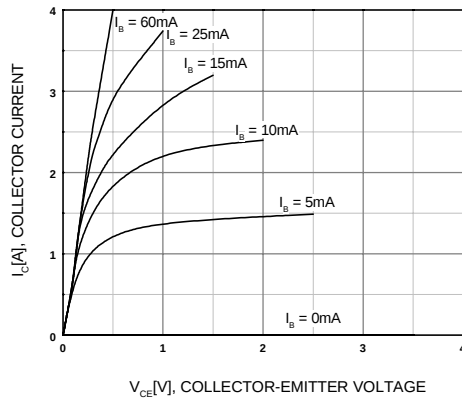


Figure 1. Static Characteristic

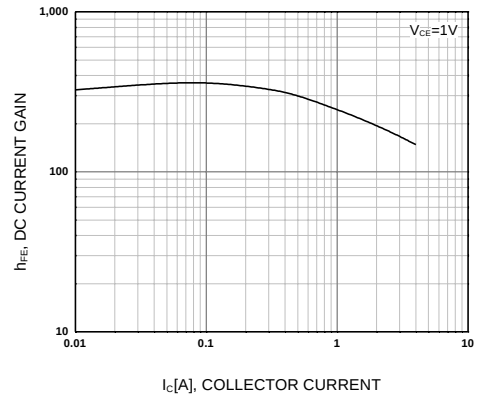


Figure 2. DC current Gain

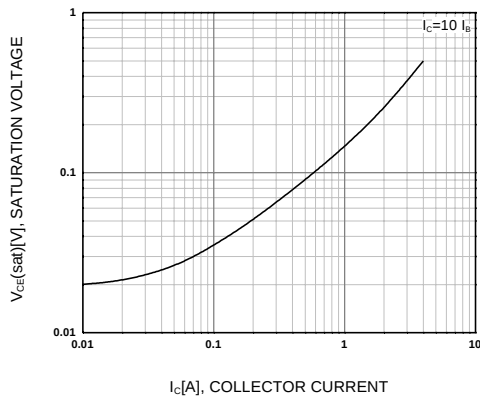


Figure 3. Collector-Emitter Saturation Voltage

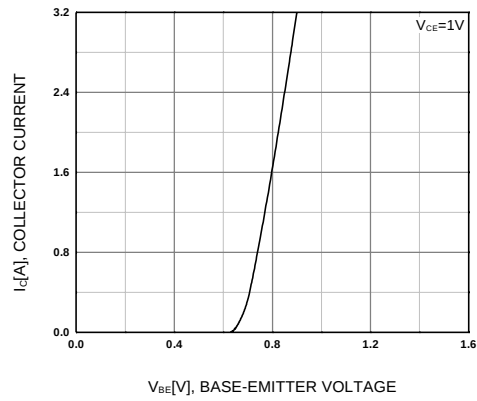


Figure 4. Base-Emitter On Voltage

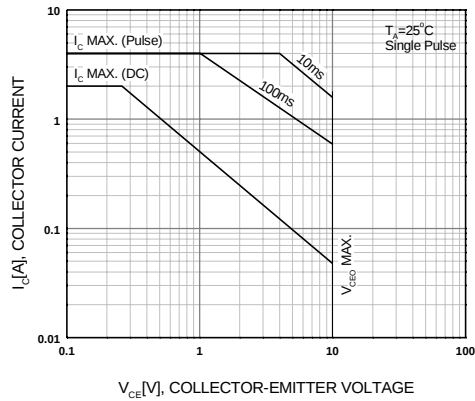


Figure 5. Safe Operating Area

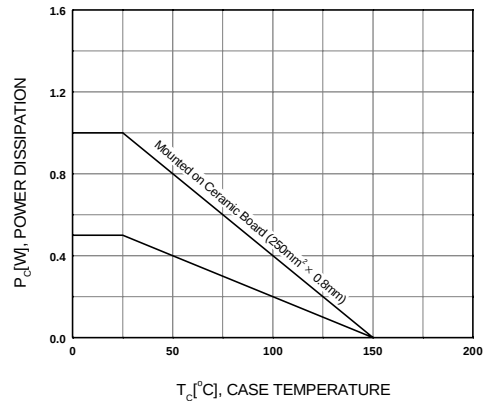
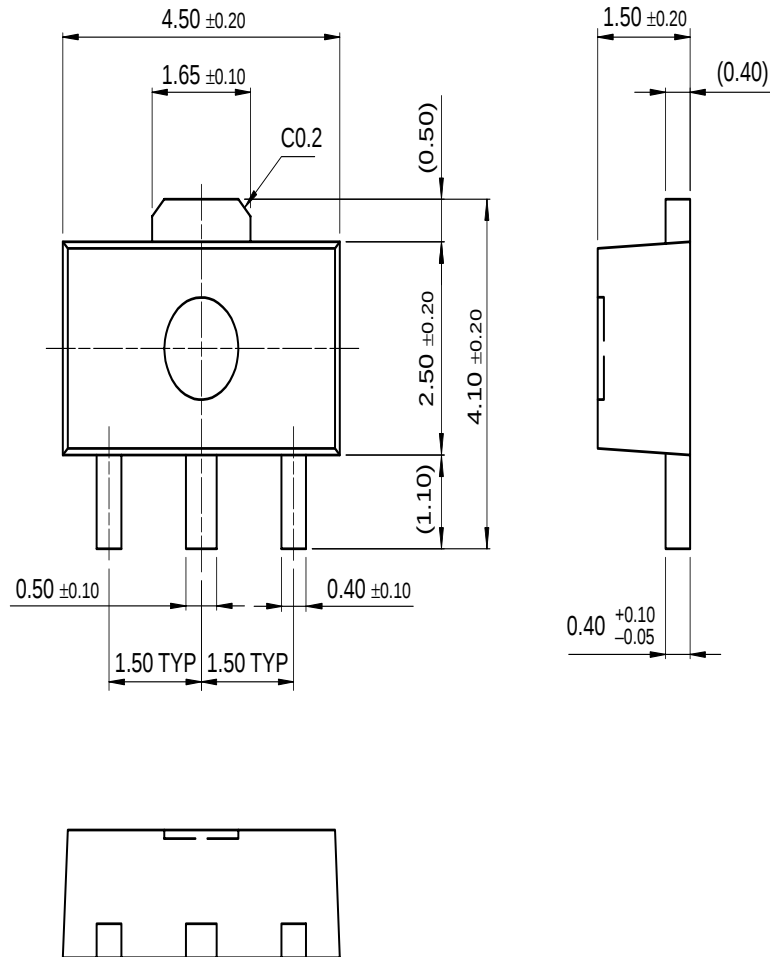


Figure 6. Power Derating

Package Dimensions

SOT-89



Dimensions in Millimeters

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