Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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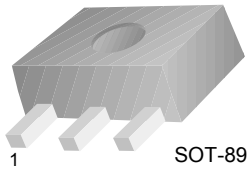
FAIRCHILD
SEMICONDUCTOR®

July 2005

KSC2982
NPN Epitaxial Silicon Transistor

Strobe Flash & Medium Power Amplifier

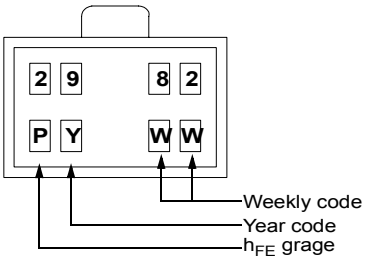
- Excellent h_{FE} Linearity : h_{FE1}=140 ~ 600
- Low Collector-Emitter Saturation Voltage : V_{CE}(sat)=0.5V
- Collector Dissipation : P_C=1~2W in Mounted on Ceramic Board



SOT-89

1. Base 2. Collector 3. Emitter

Marking



Absolute Maximum Ratings T_a = 25°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 P_C*	Collector Power Dissipation	500 1,000	mW mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

* PW ≤ 10ms, Duty Cycle ≤ 30%

Mounted on Ceramic Board (250mm^2 x 0.8mm)

Electrical Characteristics T_a = 25°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_{FE} Classification

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

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
2982	KSC2982	SOT-89	13”	--	4,000

Typical Performance Characteristics

Figure 1. Static Characteristic

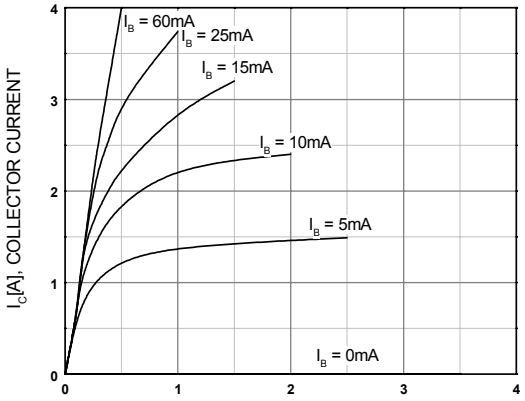


Figure 2. DC Current Gain

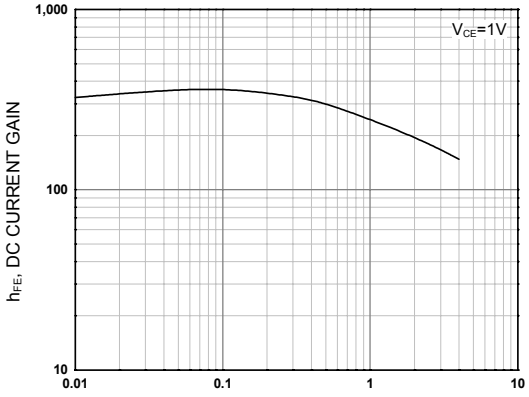


Figure 3. DCollector-Emitter Saturation Voltage

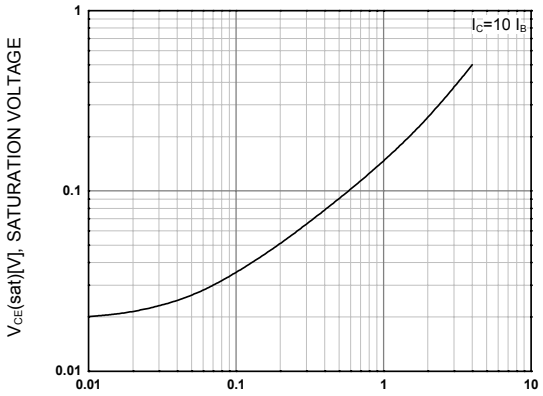


Figure 4. Base-Emitter On Voltage

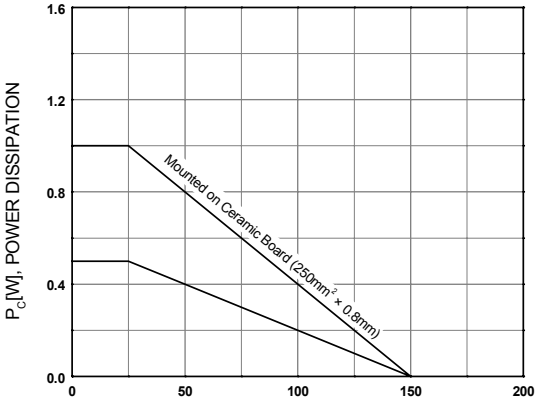


Figure 5. Safe Operating Area

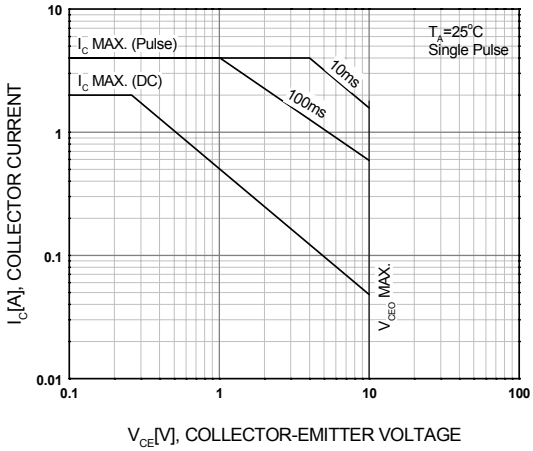
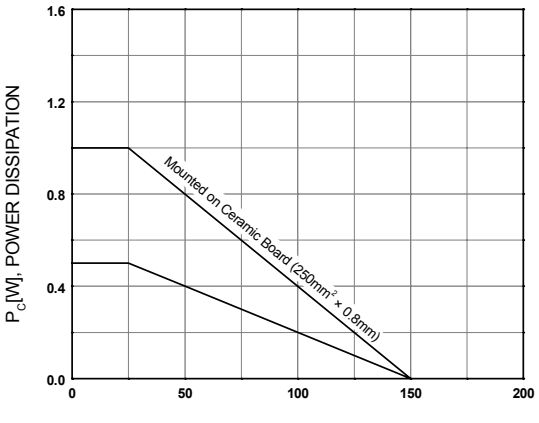
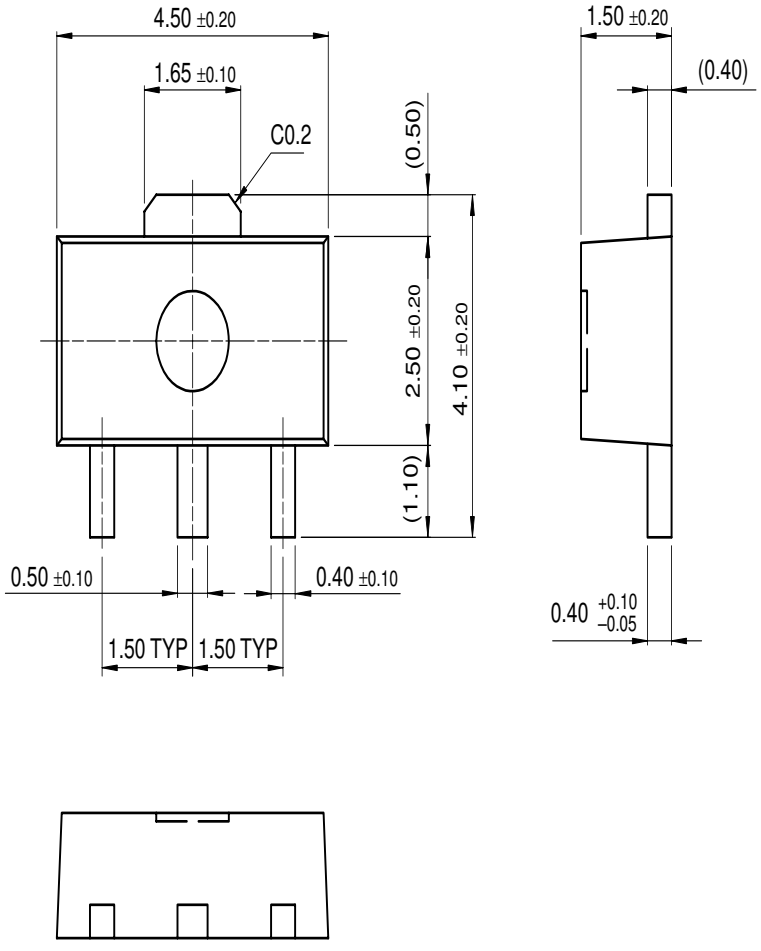


Figure 6. Power Derating



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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