



**DONGGUAN NANJING ELECTRONICS LTD.,**  
**High hFE,Low-Frequency**  
**General-Purpose Amplifier Applications**

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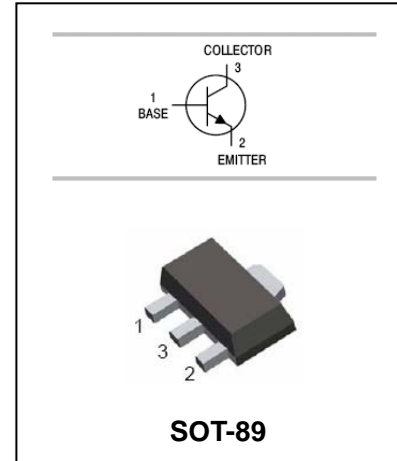
## 2SC3650

### FEATURES

- High DC current gain.
- Low collector-to-emitter saturation voltage.
- Large current capacity.
- Very small size making it easy to provide high-Density,small-sized hybrid IC' s.

### APPLICATIONS

LFamplifiers,various drivers,muting circuit



### ORDERING INFORMATION

Type No.	Marking	Package Code
2SC3650	CF	SOT-89

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	15	V
I <sub>C</sub>	Collector Current -Continuous	1.2	A
I <sub>CP</sub>	Collector Current(Pulse)	2	A
P <sub>C</sub>	Collector Dissipation	500	mW
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55 to +150	°C

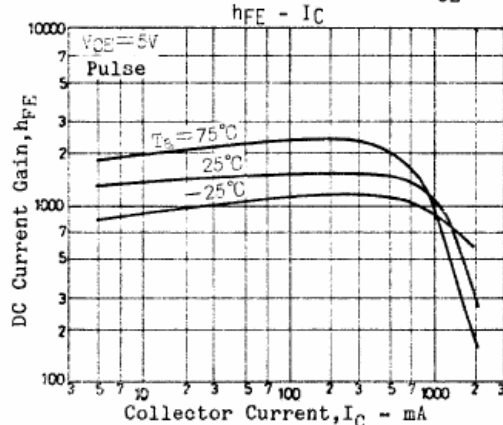
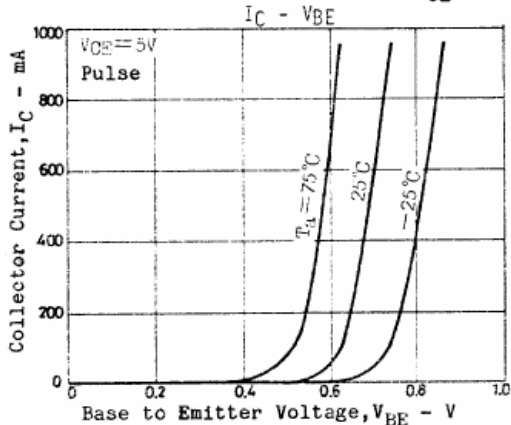
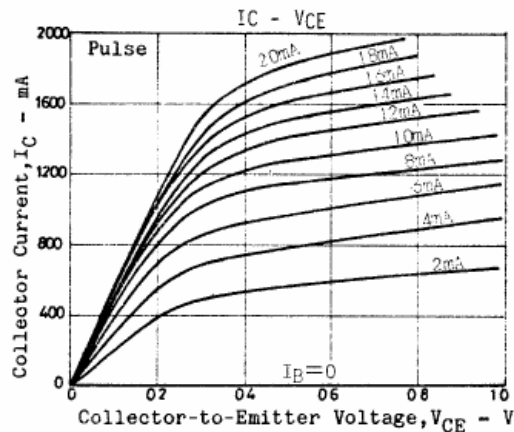
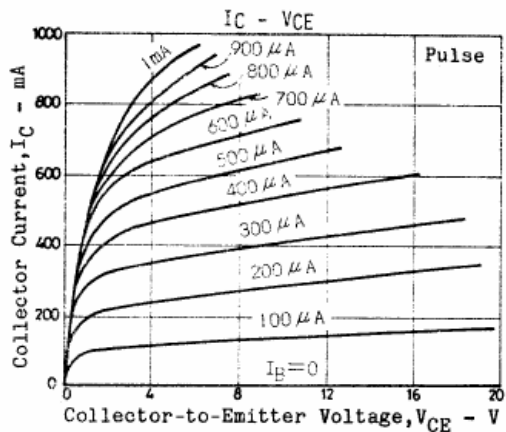
# High $h_{FE}$ , Low-Frequency General-Purpose Amplifier Applications

## 2SC3650

ELECTRICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	15			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=10\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	800	1500	3200	
		$V_{CE}=5\text{V}, I_C=10\text{mA}$	600			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5\text{A}, I_B=0.01\text{A}$		0.12	0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=0.5\text{A}, I_B=0.01\text{A}$		0.85	1.2	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}$		220		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		17		pF

TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



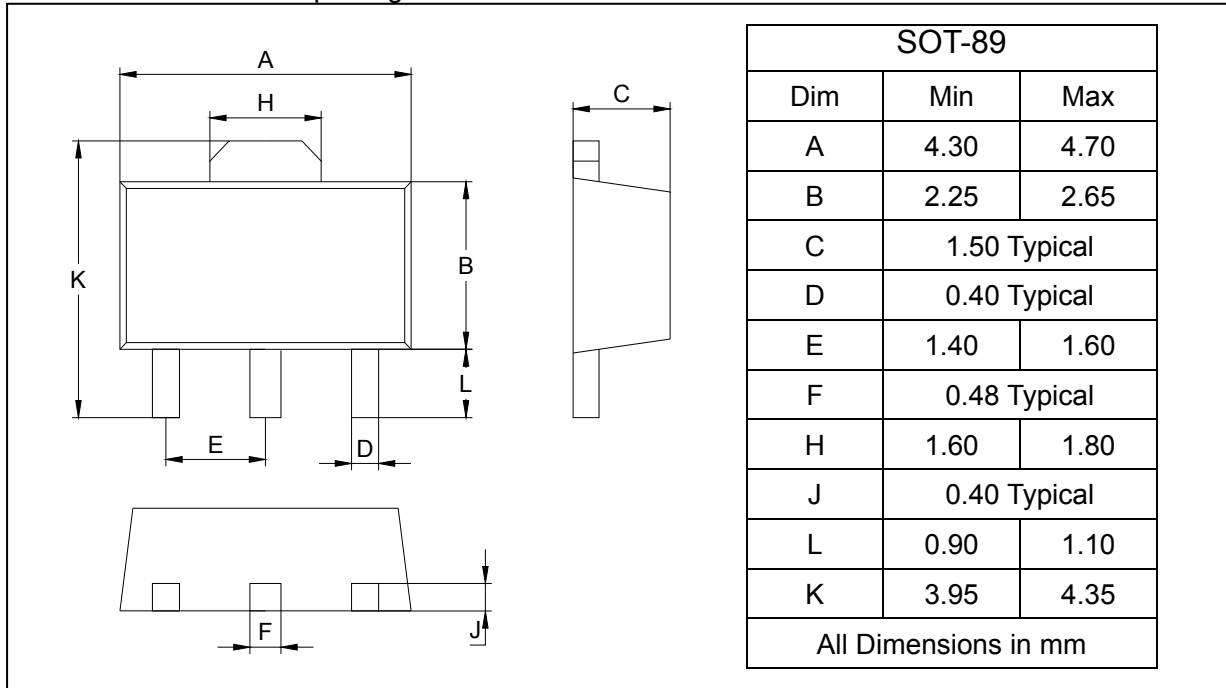
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**2SC3650**

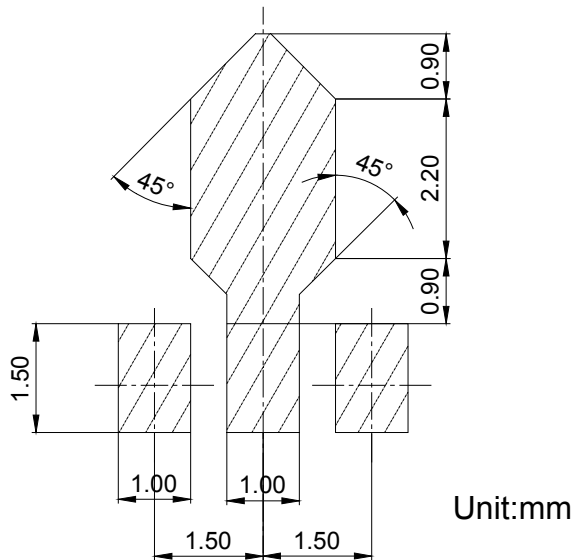
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-89



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
2SC3650	SOT-89	1000/Tape&Reel