

## SANYO Semiconductors DATA SHEET

# 2SC3650 — High hFE, Low-Frequency General-Purpose Amplifier Applications

### **Applications**

· LF amplifiers, various drivers, muting circuit.

#### **Features**

- High DC current gain (hFE=800 to 3200).
- · Low collector-to-emitter saturation voltage (VCE(sat)≤0.5V).
- Large current capacity (IC=1.2A).
- · Ultrasmall size making it easy to provide high-density, small-sized hybrid IC's.

#### **Specifications**

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		30	V
Collector-to-Emitter Voltage	VCEO		25	V
Emitter-to-Base Voltage	VEBO		15	V
Collector Current	IC		1.2	А
Collector Current (Pulse)	ICP		2	Α
Collector Dissipation	De		500	mW
	PC	Mounted on a ceramic board (250mm <sup>2</sup> X0.8mm)	1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Marking: CF

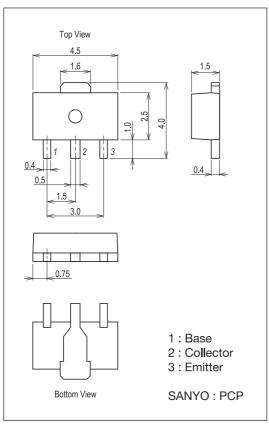
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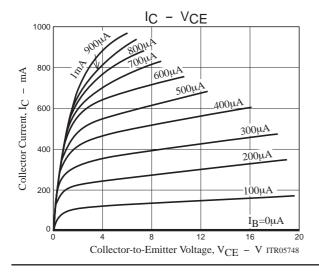
#### **Electrical Characteristics** at Ta=25°C

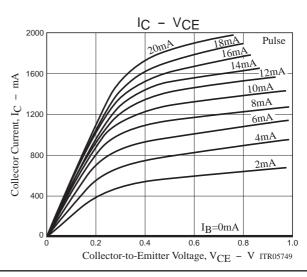
Parameter	Symbol	Conditions	Ratings			1.124
			min	typ	max	Unit
Collector Cutoff Current	ICBO	V <sub>CB</sub> =20V, I <sub>E</sub> =0A			0.1	μΑ
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =10V, I <sub>C</sub> =0A			0.1	μΑ
DC Current Gain	hFE1	V <sub>CE</sub> =5V, I <sub>C</sub> =500mA	800	1500	3200	
	hFE2	VCE=5V, IC=10mA	600			
Gain-Bandwidth Product	f⊤	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		220		MHz
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		17		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA		0.12	0.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE</sub> (sat)	I <sub>C</sub> =500mA, I <sub>B</sub> =10mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> =10μA, I <sub>E</sub> =0A	30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =1mA, I <sub>B</sub> =0A	25			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =10μA, I <sub>C</sub> =0A	15			V

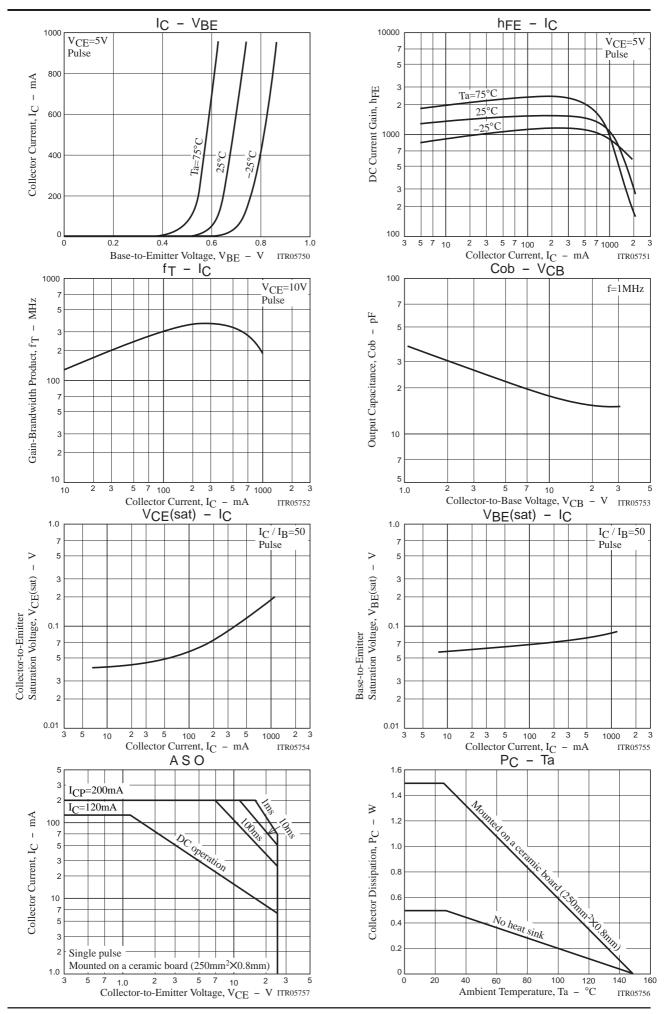
#### **Package Dimensions**

unit : mm (typ) 7007B-004









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