NPN Epitaxial Planar Silicon Transistor

2SC3650



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

Applications

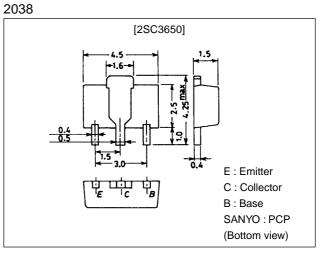
· LF amplifiers, various drivers, muting circuit.

Features

- · High DC current gain (h_{FE} =800 to 3200).
- \cdot Low collector-to-emitter saturation voltage (V_{CE(sat)} \leq 0.5 V).
- · Large current capacity ($I_C=1.2V$).
- Very small size making it easy to provide highdensity, small-sized hybrid IC's.

Package Dimensions

unit:mm



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		30	V
Collector-to-Emitter Voltage	V _{CEO}		25	V
Emitter-to-Base Voltage	VEBO		15	V
Collector Current	ι _C		1.2	A
Collector Current (Pulse)	ICP		2	A
Collector Dissipation	PC		500	mW
	PC*		1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

* Mounted on ceramic board (250mm²×0.8mm)

Electrical Characteristics at Ta = 25°C

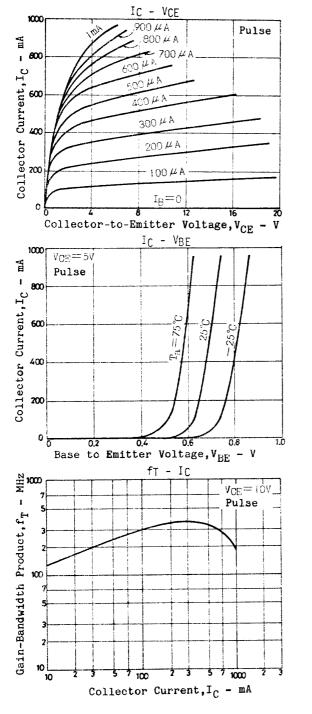
Parameter	Symbol	Conditions	Ratings			Unit
Falanielei			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =20V, I _E =0			0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =10V, I _C =0			0.1	μA
DC Current Gain	h _{FE} 1	$V_{CE}=5V, I_{C}=500$ mA	800	1500	3200	
	h _{FE} 2	V _{CE} =5V, I _C =10mA	600			
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =50mA		220		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		17		pF

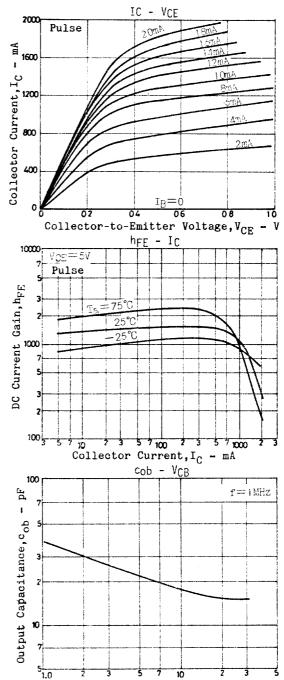
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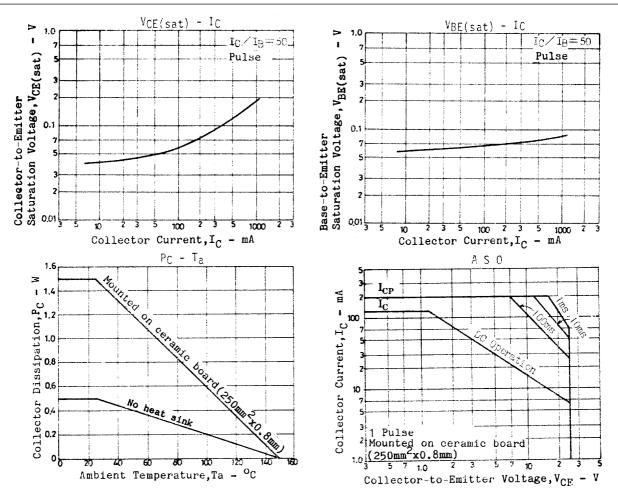
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Onit
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =500mA, I _B =10mA		0.12	0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =500mA, I _E =10mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =10μA, I _E =0	30			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	25			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I _E =10μΑ, I _C =0	15			V





Collector-to-Base Voltage, V_{CB} - V



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