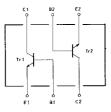


NPN Epitaxial Planar Silicon Composite Transistor Low-Frequency General-Purpose Amp, General Driver Applications

Features

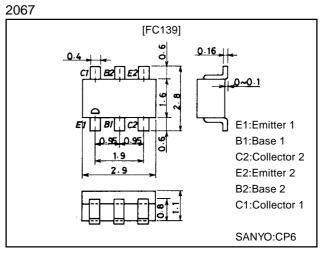
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC139 is formed with two chips, being equivalent to the 2SC3689, placed in one package.
- · Adoption of FBET process.
- · High DC current gain (h_{FE} =800 to 3200).
- · High V_{EBO} (V_{EBO} \geq 15V)
- · Excellent in thermal equilibrium and pair capability.

Electrical Connection



Package Dimensions

unit:mm



FC139

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		60	V
Collector-to-Emitter Voltage	VCEO		50	V
Emitter-to-Base Voltage	VEBO		15	V
Collector Current	۱ _C		100	mA
Collector Current (Pulse)	ICP		200	mA
Base Current	Ι _Β		20	mA
Collector Dissipation	PC	1 unit	200	mW
Total Dissipation	PT		300	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

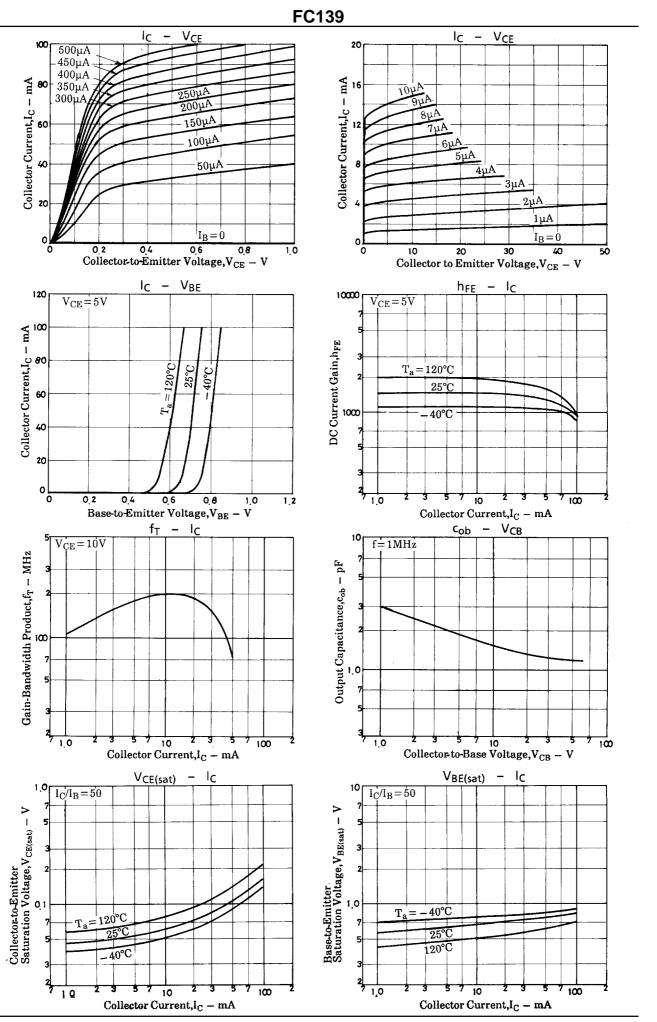
Electrical Characteristics at Ta = 25°C

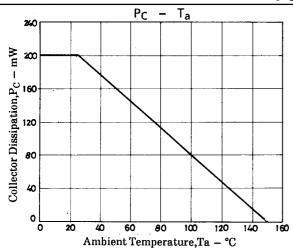
Parameter	Symbol	Conditons		Ratings		
			min	typ	max	Unit
Collector Cutoff Current	ICBO	V _{CB} =40V, I _E =0			0.1	μA
Emitter Cutoff Current	IEBO	V _{EB} =10V, I _C =0			0.1	μA
DC Current Gain	hFE	V _{CE} =5V, I _C =10mA	800	1500	3200	
DC Current Gain Ratio	hFE(small/ large)	V _{CE} =5V, I _C =10mA	0.8	0.98		
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =10mA		200		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		1.5		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C =50mA, I _B =1mA		0.1	0.5	V
B-E Saturation Voltage	V _{BE(sat)}	I _C =50mA, I _B =1mA		0.8	1.1	V
C-B Breakdown Voltage	V(BR)CBO	I _C =10μΑ, I _E =0	60			V
C-E Breakdown Voltage	V(BR)CEO	I _C =1mA, R _{BE} =∞	50			V
E-B Breakdown Voltage	V(BR)EBO	I _E =10μA, I _C =0	15			V

Note: The specifications shown above are for each individual transistor.

Marking:139







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