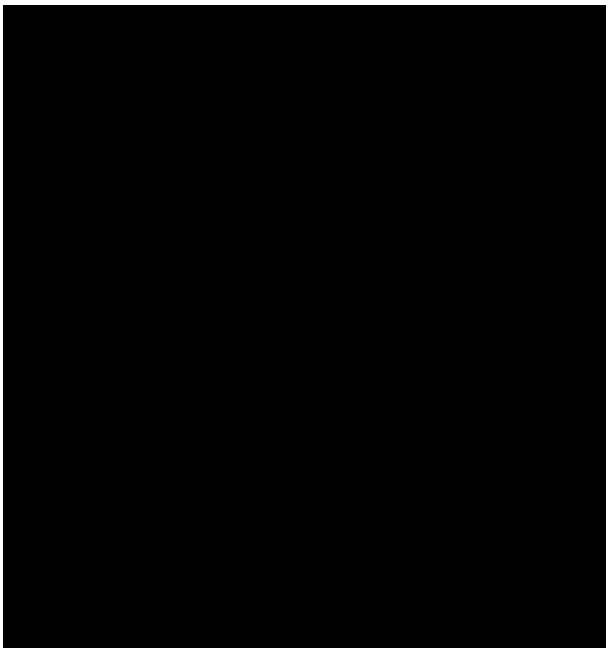
PNP Plastic-Encapsulate Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- High power dissipation capability
- Part no. with suffix “Q” means AEC-Q101 qualified

Application

- Linear voltage regulators Low-side switches
- Battery-driven devices MOSFET drivers
- Amplifiers

Mechanical Data

- **Package**: SOT-223
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Ma ! ɹ ɒ ˇ**

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BCP53-16Q	F2	Approximate 0.11	2500	5000	25000	13” reel

■Maximum Ratings (Ta=25 unless otherwise noted)

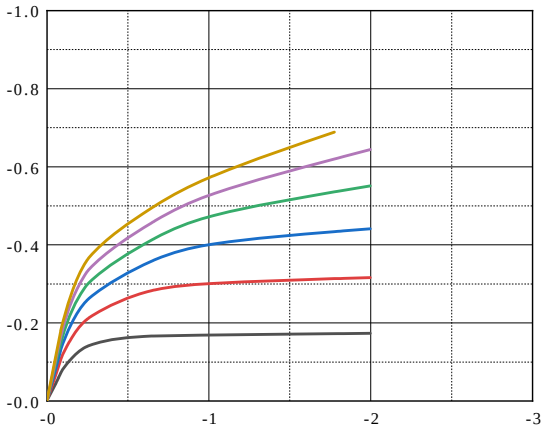
Item	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	-80
Collector-Base Voltage	V_{CBO}	V	-100
Emitter-Base Voltage	V_{EBO}	V	-5
Collector Current	I_C	A	-1
Power Dissipation (*)	P_D	W	1.5
Thermal Resistance From Junction To Ambient (*)	R_{dJA}	/W	83.3
Thermal Resistance From Junction To Solder Point	R_{dJs}	/W	16
Operation Junction Temperature	T_j		-55 to +150
Storage Temperature	T_{stg}		-55 to +150

(*) Device mounted on FR-4 PCB 1.575 x 1.575 x 0.0625 inch; mounting pad for collector =0.93 sq in

■Electrical Characteristics (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V_{CBO}	V	I_C= -100εA,I_E=0	-100	-	-
Collector-emitter breakdown voltage	V_{CEO}	V	I_C= -10mA,I_B=0	-80	-	-
Emitter-base breakdown voltage	V_{EBO}	V	I_E= -100εA,I_C=0	-5	-	-
Collector-base cut-off current	I_{CBO}	nA	V_{CB}= -30V,I_E=0	-	-	-100
Collector-emitter cut-off current	I_{EBO}	nA	V_{EB}= -5V,I_C=0	-	-	-100
DC current gain	h_{FE}		V_{CE}= -2V,I_C= -5mA	63	-	-
	h_{FE}		V_{CE}= -2V,I_C= -150mA	100	-	250
	h_{FE}		V_{CE}= -2V,I_C= -500mA	40	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C= -500mA,I_B= -50mA	-	-	-0.5
Base-Emitter Voltage	V_{BE}	V	V_{CE}= -2V,I_C= -500mA	-	-	-1
Collector-Base Capacitance	C_{ob}	pF	V_{CB}= -10V,I_E=0,f=1MHz	-	15	-
Transition frequency	fT	MHz	V_{CE}= -10V,I_C= -50mA,f=30MHz	100	-	-

■**Characteristics** (Typical)



Base-Emitter Voltage V (V)

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