
2SC2776

Silicon NPN Epitaxial Planar

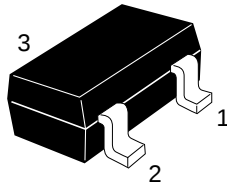
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Application

- VHF amplifier
- Mixer, Local oscillator

Outline

MPAK



1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

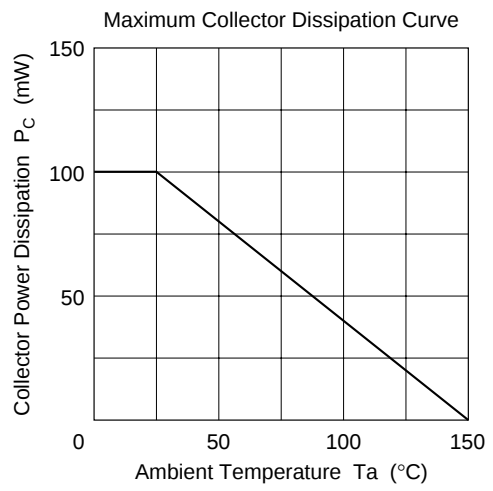
Electrical Characteristics (Ta = 25°C)

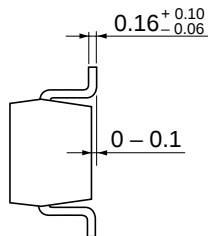
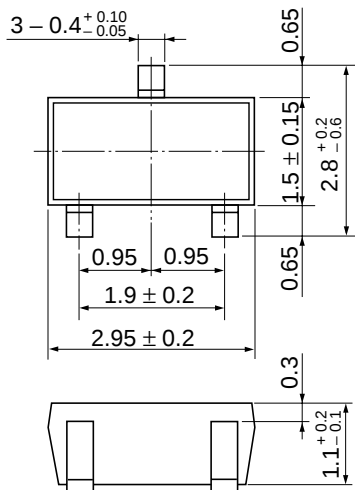
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1\text{ mA}$, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	V	$I_E = 10\text{ }\mu\text{A}$, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 10\text{ V}$, $I_E = 0$
DC current transfer ratio	h_{FE}^{*1}	35	—	200		$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.8	1.2	V	$I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$
Collector output capacitance	C_{ob}	—	1.1	—	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$
Gain bandwidth product	f_T	—	320	—	MHz	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$
Noise figure	NF	—	5.5	—	dB	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$, $f = 100\text{ MHz}$, $R_g = 50\text{ }\Omega$
Power gain	PG	—	17	—	dB	$V_{CE} = 6\text{ V}$, $I_C = 1\text{ mA}$, $f = 100\text{ MHz}$, $R_g = 100\text{ }\Omega$, $R_L = 550\text{ }\Omega$, Unneutralized

Note: 1. The 2SC2776 is grouped by h_{FE} as follows.

Grade	A	B	C
Mark	VA	VB	VC
h_{FE}	35 to 70	60 to 120	100 to 200

See characteristic curves of 2SC1342.





Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.011 g

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