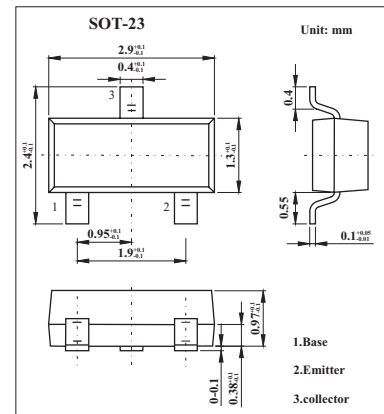


## Silicon NPN Epitaxial Type

## 2SC2713

## ■ Features

- High voltage  $V_{CE0}=120V$
- High  $h_{FE}$
- Low noise.
- Small package.

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	120	V
Collector-emitter voltage	$V_{CEO}$	120	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	100	mA
Base current	$I_B$	20	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	125	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ C$

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 120 V, I_E = 0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5 V, I_C = 0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 6 V, I_C = 2 mA$	200		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 mA, I_B = 1 mA$			0.3	V
Transition frequency	$f_T$	$V_{CE} = 6 V, I_C = 1 mA$		100		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$		3		pF
Noise figure	NF	$V_{CB}=6 V, I_C=0.1 mA, f=1 kHz, R_G=10 k\Omega$		1.0	10	dB

■  $h_{FE}$  Classification

Marking	DG	DL
Rank	GR	BL
$h_{FE}$	200~400	350~700