

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			0.1	μA
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