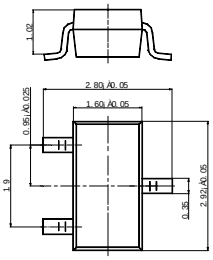
2SC3838K TRANSISTOR (NPN)

SOT-23-3L

1. BASE
2. EMITTER
3. COLLECTOR



FEATURES

Power dissipation

P_{CM}: 0.15 W (Tamb=25℃)

Collector current

I_{CM}: 0.05 A

Collector-base voltage

$V_{(BR)CBO}$: 20 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=10μA, I_E=0	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic= 1mA, I_B=0	11			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 10μA, I_C=0	3			V
Collector cut-off current	I_{CBO}	V_{CB}= 10 V , I_E=0			0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 2V , I_C=0			0.5	μA
DC current gain	h_{FE}	V_{CE}= 10V, I_C= 5mA	27		270	
Collector-emitter saturation voltage	V_{CE} (sat)	I_C=-10 mA, I_B= 5mA			0.5	V
Transition frequency	f_T	V_{CE}=10V, I_C= 10mA f = 500MHz	1.4			GHz
Noise figure	F	V_{CE}=6V, I_C= 2mA f = 500MHz			4	dB

CLASSIFICATION OF h_{FE}

Rank	L	M	N	P	Q
Range	27-56	39-82	56-120	82-180	120-270

Marking	**AD**

WEJ ELECTRONIC CO.LTD