

2SD1781K TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM} : 200 mW ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.8 A

Collector-base voltage

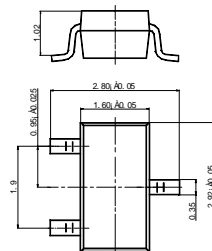
$V_{(BR)CBO}$: 40 V

Operating and storage junction temperature range

T_J T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

SOT-23-3L

1. BASE
2. EMITTER
3. COLLECTOR



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.5	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=3V, I_C=100mA$	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.4	V
Transition frequency	f_T	$V_{CE}=5V, I_C=50mA, f=100MHz$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		10		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R
Range	120-270	180-390
Marking	AFQ	AFR