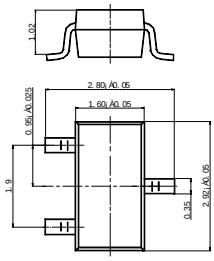
SOT-23-3L

1. BASE
2. EMITTER
3. COLLECTOR



2SD780/2SD780A TRANSISTOR (NPN)

FEATURES

Power dissipation

$P_{CM:}$ 0.2 W (Tamb=25℃)

Collector current

$I_{CM:}$ 0.3 A

Collector-base voltage

$V_{(BR)CBO}$: 60 V 2SD780

$V_{(BR)CBO}$: 80 V 2SD780A

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=0.1mA, I_E=0	2SD780	60			V
			2SD780A	80			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic=1mAI_B=0	2SD780	60			V
			2SD780A	80			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.1mA, I_C=0		5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0				0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0				0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=1V, I_C=50mA		110		400	
	$h_{FE(2)}$	V_{CE}=2V, I_C=300mA		30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=300mA, I_B=30mA				0.6	V
Base-emitter voltage	V_{BE}	V_{CE}=6V, I_C=10mA		0.6		0.7	V
Transition frequency	f_T	V_{CE}=6V, I_C=10mA			140		MHz
Collector output capacitance	C_{ob}	V_{CB}=6V, I_E=0, f=1MHz			7		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank						
Range		110-180	135-220	170-270	200-320	250-400
Marking	2SD780	**DW1**	**DW2**	**DW3**	**DW4**	**DW5**
	2SD780A	**D51**	**D52**	**D53**	**D54**	**D55**