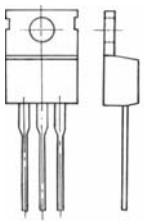
Transys Electronics LIMITED

TO-220 Plastic-Encapsulate Transistors

2SD313 TRANSISTOR (NPN)

TO-220

1. BASE
2. COLLECTOR
3. EMITTER



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FEATURES

Power dissipation

P_{CM}: 1.75 W (Tamb=25℃)

Collector current

I_{CM}: 3 A

Collector-base voltage

$V_{(BR)CBO}$: 60 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=100μA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic=1mA, I_B=0	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			100	μA
Collector cut-off current	I_{CEO}	V_{CE}=60V, I_E=0			1	mA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			100	μA
DC current gain	$h_{FE(1)}$	V_{CE}=2V, I_C=1A	40		320	
	$h_{FE(2)}$	V_{CE}=2V, I_C=0.1A	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=2A, I_B=200mA			1	V
Base-emitter voltage	V_{BE}	V_{CE}=2V, I_C=1A			1.5	V
Transition frequency	f_T	V_{CE}=5V, I_C=500mA		8		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0,f=1MHz		65		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	C	D	E	F
Range	40-80	60-120	100-200	160-320