

TRANSISTOR (NPN)
Plastic-Encapsulate Transistor

FEATURES	
Power dissipation	P_{CM} : 2W ($T_{amb}=25^{\circ}C$)
Collector current	I_{CM} : -6A
Collector-base voltage	$V_{(BR)CBO}$: TIP42A : -60V TIP42B: -80V TIP42C: -100V
Operating and storage junction temperature range	T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

TO-220

1. BASE
2. COLLECTOR
3. EMITTER

UNIT:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

 Ratings at $25^{\circ}C$ ambient temperature unless otherwise specified.

ELECTRICAL CHARACTERISTICS

Parameters		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base voltage	42A	$V_{(BR)CBO}$	$I_C=-1mA, I_E=0$	-60		V
	42B			-80		
	42C			-100		
Collector-emitter voltage	42A	$V_{(BR)CEO}$	$I_C=-30mA, I_B=0$	-60		V
	42B			-80		
	42C			-100		
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E=-1mA, I_C=0$	-5		V
Collector cut-off current	42A	I_{CBO}	$V_{CB}=-60V, I_E=0$		-0.4	mA
	42B		$V_{CB}=-80V, I_E=0$			
	42C		$V_{CB}=-100V, I_E=0$			
Collector cut-off current	42A	I_{CEO}	$V_{CE}=-30V, I_B=0$		-0.7	mA
	42B		$V_{CE}=-30V, I_B=0$			
	42C		$V_{CE}=-60V, I_B=0$			
Emitter cut-off current		I_{EBO}	$V_{EB}=-5V, I_C=0$		-1	mA
DC current gain	$h_{FE(1)}$		$V_{CE}=-4V, I_C=-0.3A$	30		
	$h_{FE(2)}$		$V_{CE}=-4V, I_C=-3A$	15	75	
Collector-emitter saturation voltage		V_{CEsat}	$I_C=-6mA, I_B=-0.6mA$		-1.5	V
Base-emitter voltage		$V_{BE(on)}$	$V_{CE}=-4V, I_C=-6mA$		-2	V
Transition frequency		f_r	$V_{CE}=-10V, I_C=-0.5mA$ $f=1MHz$	3		MHz