

MAXIMUM RATINGS

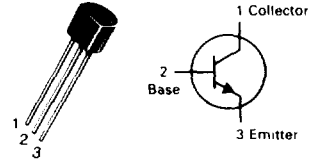
Rating	Symbol	PBF493RS	Unit
Collector-Emitter Voltage	V_{CEO}	300	Vdc
Collector-Base Voltage	V_{CBO}	300	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current — Continuous	I_C	500	mAdc
Total Device Dissipation (at $T_A = 25^\circ\text{C}$ Derate above 25°C)	P_D	625 5.0	mW mW/°C
Total Device Dissipation (at $T_C = 25^\circ\text{C}$ Derate above 25°C)	P_D	1.5 12	Watt mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W

PBF259RS

CASE 29-04, STYLE 17
TO-92 (TO-226AA)



HIGH VOLTAGE TRANSISTORS

NPN SILICON

Refer to MPSA92 for graphs.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (1) ($I_C = 3.0$ mAdc, $I_B = 0$)	$V_{(BR)CEO}$	300	—	Vdc
Collector-Base Breakdown Voltage ($I_C = 10$ μ Adc, $I_E = 0$)	$V_{(BR)CBO}$	300	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 100$ μ Adc, $I_C = 0$)	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ($V_{CB} = 250$ Vdc, $I_E = 0$)	I_{CBO}	—	50	nAdc
Emitter Cutoff Current ($V_{EB} = 3.0$ V)	I_{EBO}	—	20	nAdc
Collector Cutoff Current ($V_{CE} = 10$ V)	I_{CEO}	—	50	nAdc
ON CHARACTERISTICS (1)				
DC Current Gain ($I_C = 20$ mAdc, $V_{CE} = 10$ Vdc) ($I_C = 1.0$ mAdc, $V_{CE} = 10$ Vdc) ($I_C = 30$ mAdc, $V_{CE} = 10$ Vdc)	h_{FE}	60 25 25	— — —	—
Collector-Emitter Saturation Voltage ($I_C = 30$ mAdc, $I_B = 1.5$ mAdc) ($I_C = 30$ mAdc, $I_B = 60$ mAdc)	$V_{CE(sat)}$	— —	0.5 1.0	Vdc
Base-Emitter Saturation Voltage ($I_C = 20$ mA, $I_B = 2.0$ mA)	$V_{BE(sat)}$	—	0.9	V
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain Bandwidth Product ($I_C = 10$ mAdc, $V_{CE} = 10$ Vdc, $f = 20$ MHz)	f_T	40	—	MHz
Output Capacitance ($V_{CB} = 20$ Vdc, $I_E = 0$, $f = 1.0$ MHz)	C_{obo}	—	3.0	pF