



TO-220 Plastic Package

2N6290

2N6290 NPN PLASTIC POWER TRANSISTOR Complementary 2N6109

Medium Power Switching and Linear Applications



Collector current	I_C	max.	7.0 A
Base current	IB	max.	3.0 A
Total power dissipation up to $T_C = 25^{\circ}C$	P _{tot}	max.	40 W
Junction temperature	T_i	max.	150 C
Storage temperature	\dot{T}_{stg} -65 to +150 °C		
THERMAL RESISTANCE			
From junction to ambient	Rth j–a	=	70 °C/W
From junction to case	Rth j–c	=	3.125 °C/W
CHARACTERISTICS			
$T_{amb} = 25^{\circ}C$ unless otherwise specified			
Collector cutoff current			
$I_B = 0; V_{CE} = 40 V$	I_{CEO}	max.	1.0 mA
$V_{BE} = 1.5 V; V_{CE} = 60 V$	ICEX	max.	0.1 mA
$V_{BE} = 1.5 V; V_{CE} = 50 V; T_C = 150^{\circ}C$	ICEX	max.	2.0 mA
Emitter cut-off current	-		
$I_C = 0; V_{EB} = 5 V$	IEBO	max.	1 mA
Breakdown voltages	T 7 4		50 T
$I_{C} = 0.1 A; I_{B} = 0$	$V_{CEO(sus)}^*$	min.	50 V
$I_C = I \ mA; \ I_E = 0$	V _{CBO}	min.	60 V
$I_E = I \ mA; I_C = 0$	VEBO	min.	5.0 V
Saturation voltages	17 *		101/
$I_C = 2.5 A; I_B = 0.25 A$	VCEsat"	max.	1.0 V
$I_C = /A; I_B = 3A$	VCEsat*	max.	3.5 V
Base emitter on voltage	T 7		4 11 11
$I_C = 2.5 A; V_{CE} = 4 V$	$V_{BE(on)}^{*}$	max.	1.5 V
$I_C = 7 A; V_{CE} = 4 V$	$V_{BE(on)}^*$	max.	3.0 V
D.C. current gain			
$I_C = 2.5 A; V_{CE} = 4 V$	h_{FE}^*	min.	30
		max.	150
$I_C = 7 A; V_{CE} = 4 V$	hFE*	min.	2.3
Small signal current gain			
$I_{C} = 0.5 A; V_{CE} = 4 V$	hfe	min.	20
Output capacitance at $f = 1$ MHz	ii.		
$I_{\rm E} = 0$: $V_{\rm CP} = 10 V$	C_{α}	max	250 nF
Transition frequency	0	man,	200 pi
$I_C = 0.5 A$: $V_{CF} = 4 V$	fT	min.	4 MHz
	1	-	

* Pulsed: pulse duration = 300 μ s; duty cycle = 1.5%

Notes

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Data Sheet