

Silicon NPN Power Transistors

2N6043 2N6044 2N6045

DESCRIPTION

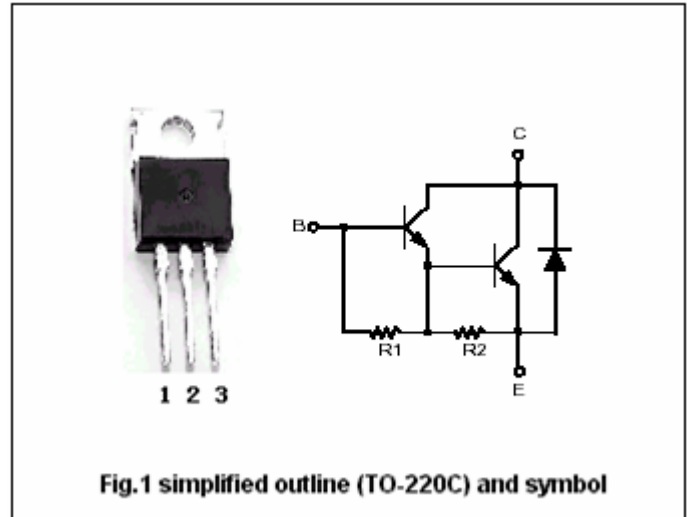
- With TO-220C package
- Complement to type 2N6040/6041/6042
- DARLINGTON
- High DC current gain
- Low collector saturation voltage

APPLICATIONS

- For general-purpose amplifier and low-speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings($T_c=25^\circ$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6043	60	V
		2N6044	80	
		2N6045	100	
V_{CEO}	Collector-emitter voltage	2N6043	60	V
		2N6044	80	
		2N6045	100	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current-DC		8	A
I_{CM}	Collector current-Peak		16	A
I_B	Base current-DC		120	mA
P_D	Total power dissipation	$T_c=25^\circ$	75	W
		$T_a=25^\circ$	2.2	
T_j	Junction temperature		150	$^\circ$
T_{stg}	Storage temperature		-65~150	$^\circ$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.67	$^\circ/W$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	2N6043	I _C =30mA, I _B =0	60			V
		2N6044		80			
		2N6045		100			
V _{CEsat-1}	Collector-emitter saturation voltage	2N6043/6044	I _C =4A, I _B =16mA			2.0	V
		2N6045	I _C =3A, I _B =12mA				
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =8A, I _B =80mA			4.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =8A, I _B =80mA			4.5	V
V _{BE}	Base-emitter on voltage		I _C =4A; V _{CE} =4V			2.8	V
I _{CBO}	Collector cut-off current		V _{CB} =Rated V _{CB} , I _E =0			20	μA
I _{CEO}	Collector cut-off current		V _{CE} =Rated V _{CE} , V _{BE} =-1.5V T _C =150°C			20 200	μA
I _{CEO}	Collector cut-off current		V _{CE} =Rated V _{CE} , I _B =0			20	μA
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			2.0	mA
h _{FE-1}	DC current gain	2N6043/6044	I _C =4A; V _{CE} =4V	1000		20000	
		2N6045	I _C =3A; V _{CE} =4V				
h _{FE-2}	DC current gain		I _C =8A; V _{CE} =4V	100			
C _{ob}	Output capacitance		I _E =0; V _{CB} =10V, f=0.1MHz			200	pF

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PACKAGE OUTLINE

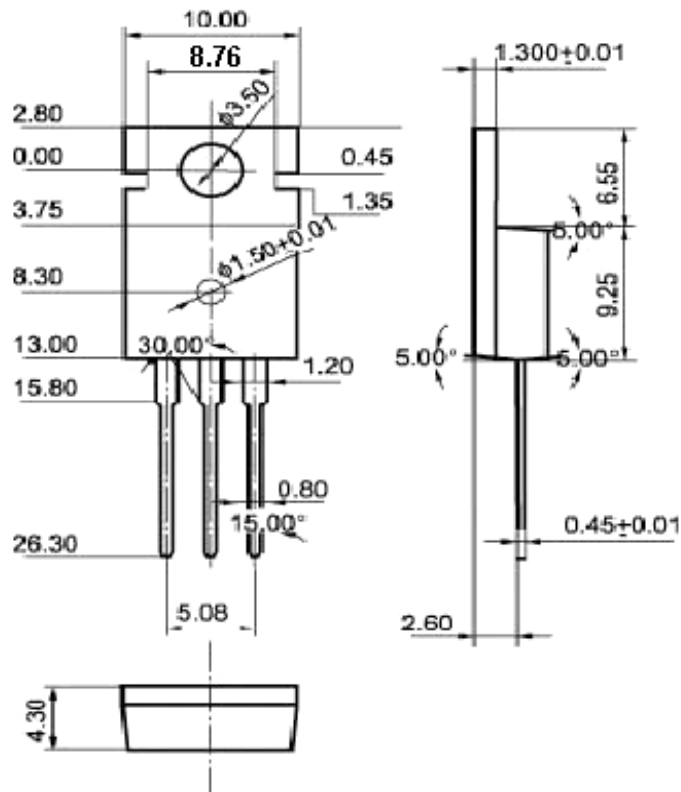


Fig.2 Outline dimensions