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
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APPLICATIONS

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

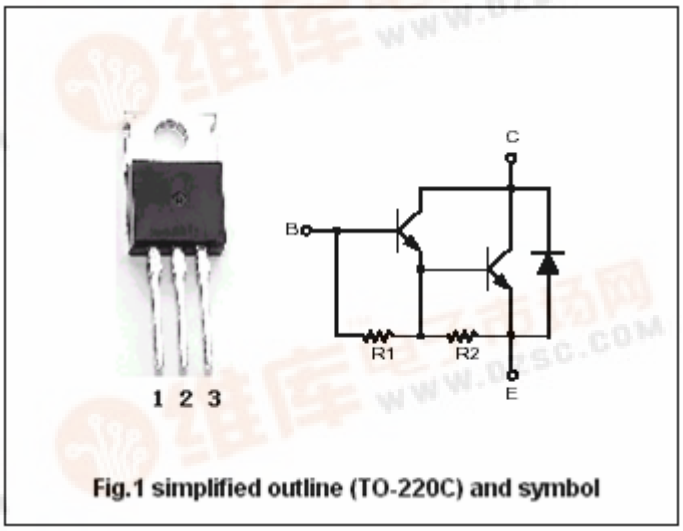

Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings(Tc=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6043	Open emitter	60	V
		2N6044		80	
		2N6045		100	
V_{CEO}	Collector-emitter voltage	2N6043	Open base	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℃	75	W
			T_a=25℃	2.2	
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-65~150	℃

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	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}=RatedV_{CE}, V_{BE}=-1.5V T_C=150℃			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

PACKAGE OUTLINE

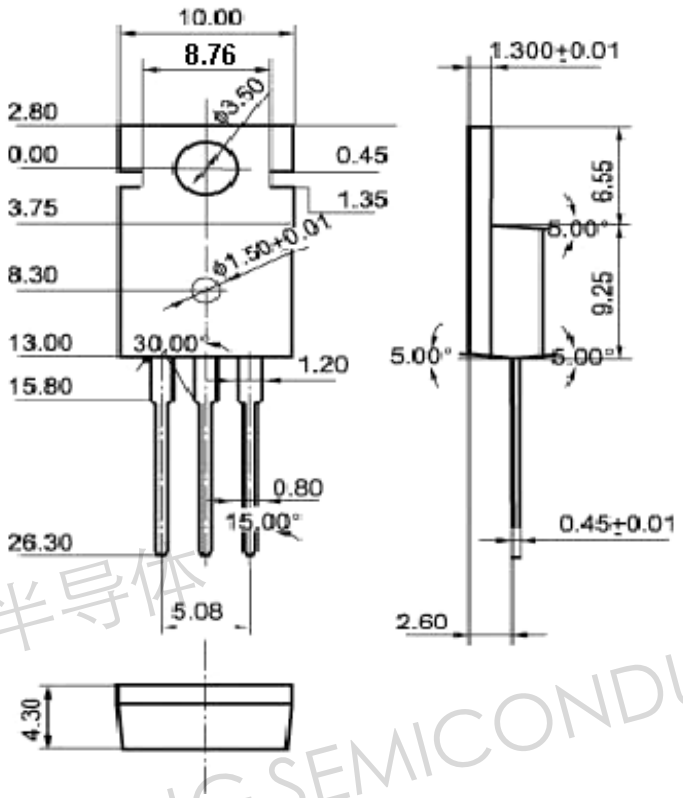

Fig.2 Outline dimensions