EN: This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

Silicon NPN Power Transistors BUT56 BUT56A

DESCRIPTION

- With TO-220C package
- High voltage;high speed
- High power dissipation

APPLICATIONS

- Switching mode power supply

PINNING

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

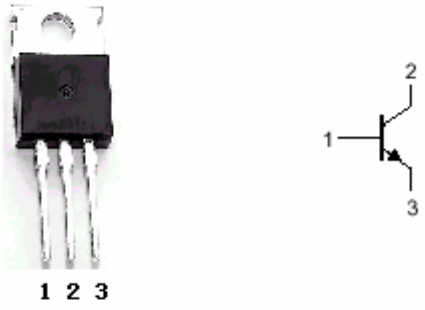


Fig.1 simplified outline (TO-220C) and symbol

Absolut maximum ratings (Ta=25 □)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUT56	Open emitter	800	V
		BUT56A		1000	
V_{CEO}	Collector-emitter voltage	BUT56	Open base	400	V
		BUT56A		450	
V_{EBO}	Emitter-base voltage		Open collector	6	V
I_C	Collector current			8	A
I_{CM}	Collector current-peak			10	A
I_{BM}	Base current-peak			4	A
P_{tot}	Total power dissipation		T_C=25 □	100	W
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to mounting case	1.25	K/W

CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BUT56	I_C=100mA ;L_C=125mH	400			V
		BUT56A		450			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		I_E=1mA ;I_C=0	6			V
V_{CEsat}	Collector-emitter saturation voltage		I_C=4A ;I_B=0.8A			5.0	V
V_{BEsat}	Base-emitter saturation voltage		I_C=4A ;I_B=0.8A			2.0	V
I_{CES}	Collector cut-off current	BUT56	V_{CE}=800V; V_{BE}=0 T_j=150			1.0 2.0	mA
		BUT56A	V_{CE}=1000V; V_{BE}=0 T_j=150			1.0 2.0	
h_{FE-1}	DC current gain		I_C=1A ; V_{CE}=5V	15		45	
h_{FE-2}	DC current gain	BUT56	I_C=4A ; V_{CE}=5V	5.5			
		BUT56A	I_C=3A ; V_{CE}=2V	4			
f_T	Transition frequency		I_C=0.5A ;V_{CE}=10V;f=1.0MHz		10		MHz

Switching times

t_{off}	Turn-off time		I_C=4A ;I_{B1}=-I_{B2}=1.25A t_p=20 s			4	s
t_f	Fall time					1	s

PACKAGE OUTLINE

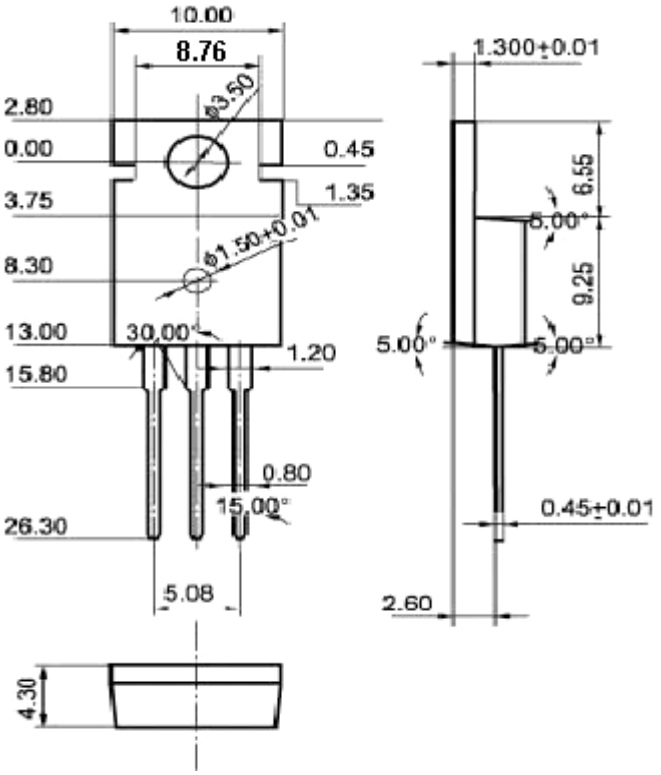


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10mm)