

Silicon NPN Power Transistors

2SD612 2SD612K

DESCRIPTION

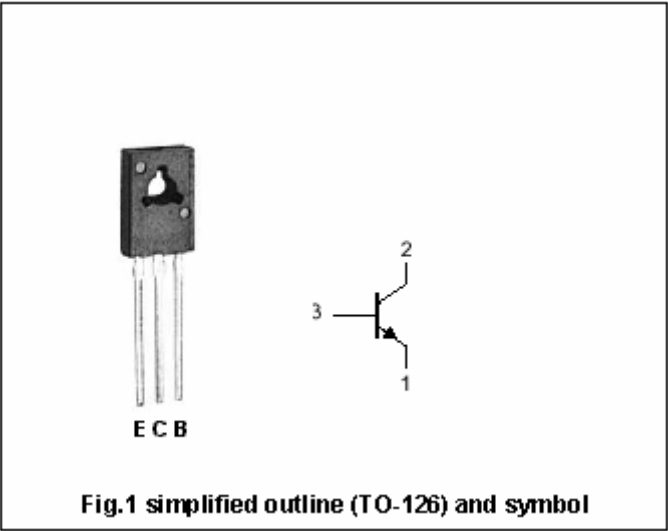
- With TO-126 package
- Complement to type 2SB632/632K
- High collector dissipation
- Wide area of safe operation

APPLICATIONS

- 25V/35V, 2A low-frequency power amplifier applications

PINNING

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



Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SD612	25	V
		2SD612K	35	
V _{CEO}	Collector-emitter voltage	2SD612	25	V
		2SD612K	35	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current (DC)		2	A
I _{CM}	Collector current-peak		3	A
P _D	Total power dissipation	T _a =25℃	1	W
		T _C =25℃	10	
T _j	Junction temperature		150	℃
T _{stg}	Storage temperature		-55~150	℃

Silicon NPN Power Transistors

2SD612 2SD612K

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD612	$I_C=1mA; R_{BE}=\infty$	25			V
		2SD612K		35			
$V_{(BR)CBO}$	Collector-base breakdown voltage	2SD612	$I_C=10\mu A; I_E=0$	25			V
		2SD612K		35			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=10\mu A; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage		$I_C=1.5A; I_B=0.15A$		0.3	0.8	V
V_{BEsat}	Base-emitter saturation voltage		$I_C=1.5A; I_B=0.15A$		1.1	1.5	V
I_{CBO}	Collector cut-off current		$V_{CB}=20V; I_E=0$			1	μA
I_{EBO}	Emitter cut-off current		$V_{EB}=4V; I_C=0$			1	μA
h_{FE-1}	DC current gain		$I_C=0.5A; V_{CE}=2V$	60		320	
h_{FE-2}	DC current gain		$I_C=1.5A; V_{CE}=2V$	30			
f_T	Transition frequency		$I_C=50mA; V_{CE}=10V$		100		MHz
C_{OB}	Collector output capacitance		$f=1MHz; V_{CB}=10V$		30		pF

Switching times

t_{on}	Turn-on time	$I_C=500mA; V_{CE}=12V$ $I_{B1}=-I_{B2}=50mA$		0.05		μs
t_f	Fall time			0.10		μs
t_{stg}	Storage time			0.40		μs

◆ h_{FE-1} Classifications

D	E	F
60-120	100-200	160-320

Silicon NPN Power Transistors

2SD612 2SD612K

PACKAGE OUTLINE

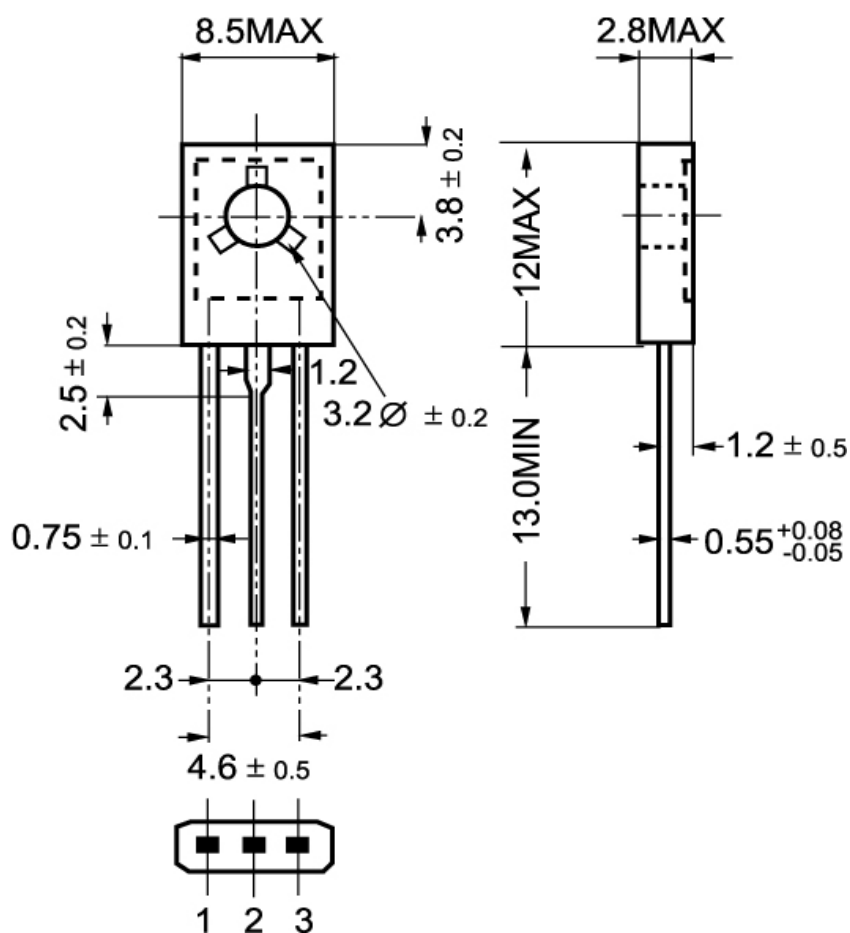


Fig.2 Outline dimensions

Silicon NPN Power Transistors

2SD612 2SD612K

