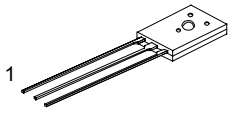
PNP SILICON TRANSISTOR

DESCRIPTION

The UTC BD136/BD138/BD140 are silicon epitaxial planer PNP transistor ,designed for use as audio amplifiers and drivers utilizing complementary or quasi complementary circuits.

The complementary NPN types are the BD135/BD137/ BD139.



TO-126

1:EMITTER 2:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage			
BD136	V_{CBO}	-45	V
BD138		-60	
BD140		-80	
Collector-Emitter Voltage			
BD136	V_{CEO}	-45	V
BD138		-60	
BD140		-80	
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	Ic	-1.5	V
Collector Peak Current	I_{CM}	-3	A
Base Current	I_B	-0.5	A
Total Dissipation (Tc≦25°C)	Ptot	12.5	W
(Ta≦25°C)		1.25	W
Storage Temperature	Tstg	-65 ~ 150	°C
Operating Junction Temperature	Tj	150	°C

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Thermal Resistance, Junction-case	θ_{jc}	10	°C/W
Thermal Resistance, Junction-ambient	θ_{jA}	100	°C/W

ELECTRICAL CHARACTERISTICS(Tc=25°C,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Sustaining Voltage BD136 BD138 BD140	V_{CEO}(sus)*	I_C =-30 mA, I_B=0	 -45 -60 -80			V
Collector Cut-off Current	I_{CBO}	V_{CB} =-30 V, I_E=0 V_{CB} =-30 V, I_E=0, Tc = 125°C			-0.1 -10	μA
Emitter Cut- off Current	I_{EBO}	V_{EB} = -5 V, I_C=0			-10	μA
DC Current Gain	h_{FE}1 h_{FE}2 h_{FE}3	V_{CE}=-2V, I_C =-5 mA, V_{CE}=-2V, I_C =-0.5A , V_{CE}=-2V, I_C =-150 mA,	25 25 40		 250	
Collector-Emitter Saturation Voltage	V_{CE}(sat)*	I_C =-0.5 A, I_B = -0.05 A			-0.5	V
Base-Emitter Voltage	V_{BE}*	I_C =-0.5 A, V_{CE} =-2 V			-1	V

* Pulsed: Pulse duration ≦ 300 μs, duty cycle 1.5 %

CLASSIFICATION OF h_{FE3}

RANK	-6	-10	-16
RANGE	40~100	63~160	100~250