

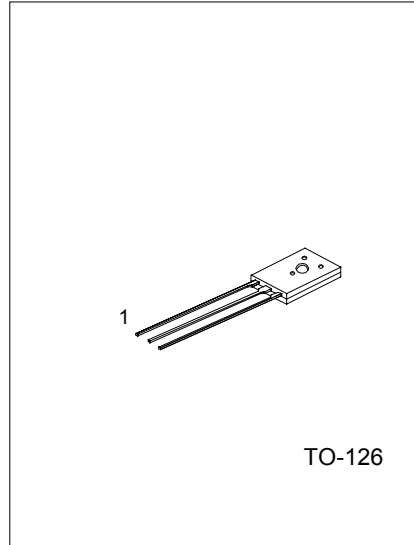
UTC BD136/138/140 PNP EPITAXIAL SILICON TRANSISTOR

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	V_{CBO}	-45	V
BD136		-60	
BD138 BD140		-80	
Collector-Emitter Voltage	V_{CEO}	-45	V
BD136		-60	
BD138 BD140		-80	
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1.5	V
Collector Peak Current	I_{CM}	-3	A
Base Current	I_B	-0.5	A
Total Dissipation	P_{tot}	($T_c \cong 25^\circ C$)	12.5
		($T_a \cong 25^\circ C$)	1.25
Storage Temperature	T_{stg}	-65 ~ 150	$^\circ C$
Operating Junction Temperature	T_j	150	$^\circ C$

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Thermal Resistance, Junction-case	θ_{jc}	10	$^\circ C/W$
Thermal Resistance, Junction-ambient	θ_{JA}	100	$^\circ C/W$

UTC BD136/138/140 PNP EPITAXIAL SILICON TRANSISTOR

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Sustaining Voltage BD136 BD138 BD140	V _{CE0(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, T _C = 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 _{FE1} h _{FE2} h _{FE3}	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

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.