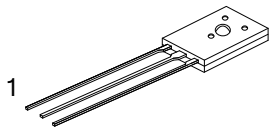
MIDDLING VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR



TO-126

■ DESCRIPTION

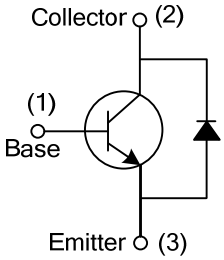
The UTC **4128D** is a middling voltage NPN power transistor. it uses UTC's advanced technology to provide customers with high switching speed and high reliability, etc.

The UTC **4128D** is suitable for commonly power amplifier circuit, electronic ballasts and energy-saving light etc.

■ FEATURES

* High switching speed
* High reliability

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
4128DL-T60-K	4128DG-T60-K	TO-126	B	C	E	Bulk

Note: Pin Assignment: B: Base C: Collector E: Emitter

4128DL-T60-T (1)Packing Type (2)Package Type (3)Lead Free	(1) B: Bulk (2) T60: TO-126 (3) L: Lead Free, G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage (V_{BE}=0)		V_{CES}	350	V
Collector-Emitter Voltage (I_B=0)		V_{CEO}	200	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	5	A
	Pulse (Note 2)	I_{CP}	10	A
Base Current	DC	I_B	2	A
	Pulse (Note 2)	I_{BP}	4	A
Total Dissipation		P_C	40	W
Junction Temperature		T_J	150	°C
Storage Temperature Range		T_{STG}	-55~+150	°C

Notes: 1. Absolute maximum ratings are stress ratings only and functional device operation is not implied. Absolute maximum ratings are those values beyond which the device could be permanently damaged.
2. Pulse Test: Pulse Width=5.0ms, Duty Cycle<10%.

■ THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	3.125	°C/W

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=1mA, I_B=0	350			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=10mA, I_B=0	200			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=1mA, I_C=0	7			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=350V, I_E=0			100	μA
Collector-Emitter Cut-Off Current	I_{CEO}	V_{CE}=200V, I_B=0			50	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=7V, I_C=0			10	μA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)1}$	I_C=1A, I_B=0.2A			0.8	V
	$V_{CE(SAT)2}$	I_C=3A, I_B=0.6A			1.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=3A, I_B=0.6A			1.6	V
DC Current Gain	h_{FE1}	I_C=0.8A,V_{CE}=5V	8		50	
	h_{FE2}	I_C=3A,V_{CE}=5V	8			
Transition Frequency	f_T	I_C=0.5A, V_{CE}=10V	4			MHz
Storage Time	t_S	V_{CC}=24V, I_C=0.5A, I_{B1}=-I_{B2}=0.1A			4	μs
Fall Time	t_F				0.7	μs