UNISONIC TECHNOLOGIES CO., LTD

D4120P

Preliminary

NPN SILICON TRANSISTOR

MEDIUM VOLTAGE **FAST-SWITCHING NPN TRANSISTOR**

DESCRIPTION

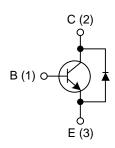
The UTC D4120P is a medium voltage fast-switching NPN power transistor. It is characterized by medium breakdown voltage, high current capability, high switching speed and high reliability.

The UTC D4120P is intended to be used in energy-saving lights, electronic ballasts, a power transform or a common power amplifier, etc.

FEATURES

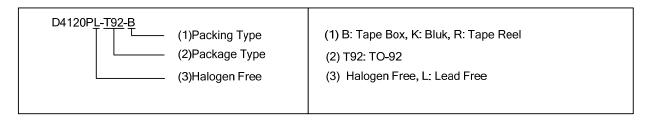
- * Medium breakdown voltage
- * High current capability
- * High switching speed
- * High reliability
- * RoHS-compliant product

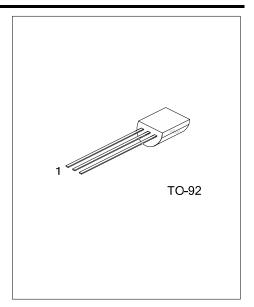
EQUIVALENT CIRCUIT



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing	
Lead Free	Halogen Free	Fackage	1	2	3	Facking	
D4120PL-T92-B	D4120PG-T92-B	TO-92	В	С	Е	Tape Box	
D4120PL-T92-K	D4120PG-T92-K	TO-92	В	С	Е	Bulk	
D4120PL-T92-R	D4120PG-T92-R	TO-92	В	С	E	Tape Reel	





■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	350	V
Collector-Emitter Voltage	V_{CEO}	200	V
Emitter-Base Voltage	V_{EBO}	7	V
Continuous Collector Current	Ic	1.5	Α
Collector Power Dissipation	Pc	1	W
Junction Temperature	TJ	150	°C
Storage Temperature	T _{STG}	-55~150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	125	°C/W

■ ELECTRICAL CHARACTERISTICS (T_C =25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Sustaining Voltage	$V_{(BR)CEO}$	$I_C=10$ mA, $I_B=0$	200			V
Collector -Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C=1$ mA, $I_E=0$	350			V
Collector -Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=0$, $I_E=1mA$	7			V
Collector Cut-Off Current	I_{CBO}	V_{CB} =300 V , I_E =0			100	μΑ
Collect Emitter Cut-off Current	I _{CEO}	$V_{CE}=200V, I_{B}=0$			50	μΑ
Emitter Cut-Off Current	I _{EBO}	$V_{EB}=7V$, $I_{C}=0$			10	μΑ
Static Forward Current Transfer Ratio	h _{FE(1)}	I_{C} =0.2A, V_{CE} =5V	8		50	
Static Forward Current Transfer Ratio	h _{FE(2)}	$I_C=1.5A, V_{CE}=5V$	5			
Callanta a Fraitta a Cata antica a Valta an	V _{CE(sat) (1)}	I _C =0.4A,I _B =0.1A			0.5	V
Collector-Emitter Saturation Voltage	V _{CE(sat) (2)}	$I_C=1A, I_B=0.5A$			2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A$, $I_B=0.25A$			1.5	V
Fall Time	t _f	V _{CC} =24V, I _C =0.5A,				μS
		I _{B1} =-I _{B2} =0.1A			0.5	μΟ
Storage Time	T _{stg}	$V_{CC}=24V, I_{C}=0.5A,$			4	μS
Storage Time		I _{B1} =-I _{B2} =0.1A			4	μΟ
Input Resistance	f⊤	$V_{CE}=10V, I_{C}=0.5A,$	4			MHz

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