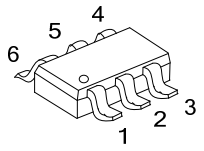
UFU520Y

DUAL TRANSISTOR

DUAL NPN WIDEBAND SILICON RF TRANSISTOR



SOT-363

■ DESCRIPTION

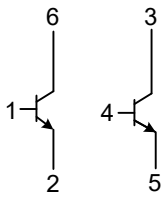
The UTC **UFU520Y** are Dual NPN silicon RF transistor for high speed, low noise applications in a plastic.

The UTC **UFU520Y** suitable for small signal to medium power applications up to 2 GHz.

■ FEATURES

* Low noise, high breakdown RF transistor
* Minimum noise figure (NFmin) = 0.65dB at 900 MHz
* Maximum stable gain 19dB at 900 MHz
* 11GHz f_T silicon technology

■ EQUIVALENT CIRCUIT



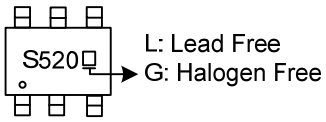
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
UFU520YL-AL6-R	UFU520YG-AL6-R	SOT-363	B1	E1	C2	B2	E2	C1	Tape Reel

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

UFU520YG-AL6-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AL6: SOT-363 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	BV_{CBO}	24	V
Collector-emitter voltage	BV_{CEO}	12	V
Emitter-Base Voltage	BV_{EBO}	24	V
Collector Current	I_C	30	mA
Collector Dissipation	P_C	450	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-50 ~ +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.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	Open Emitter I_C=100nA, I_E=0mA			24	V
Collector-Emitter Breakdown Voltage	BV_{CEO}	Open Base I_C=150nA, I_E=0mA			12	V
		Shorted Base			24	
Emitter-Base Breakdown Voltage	BV_{EBO}	Open Collector			2	V
DC Collector Current	I_C			5	30	mA
Collector Cut-off Current	I_{CBO}	I_C=0mA, V_{CB}=8V		<1		nA
DC Current Gain	h_{FE}	I_C=5mA, V_{CE}=8V	60	95	200	
Collector Capacitance	C_c	V_{CB}=8V, f=1MHz		0.30		pF
Emitter Capacitance	C_e	V_{EB}=0.5V, f=1MHz		0.64		pF
Feedback Capacitance	C_{re}	V_{EB}=8V, f=1MHz		0.48		pF
Transition Frequency	f_T	I_C=10mA, V_{CE}=8V, f=900MHz		10		GHz

Note: If K > 1 then G_{P_MAX} is the maximum power gain. If K < 1 then G_{P_MAX} = MSG.

■ TYPICAL CHARACTERISTICS