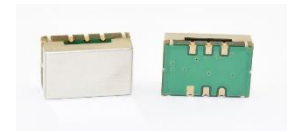


## V8F-J-155.520



### ELECTRICAL SPECIFICATIONS

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min.	Nominal/Typ.	Max.	
Frequency Nominal	F <sub>o</sub>	V <sub>cc</sub> =3.3V±5%		100.000		MHz
Supply Voltage	V <sub>cc</sub>	T <sub>a</sub> = 25°C	3.135	3.3	3.465	V
Current Consumption	I	T <sub>a</sub> = 25°C, V <sub>cc</sub> =3.3V			70	mA
Initial Frequency Tolerance	Δf	T <sub>a</sub> = 25°C, V <sub>C</sub> = 1.65V			15	ppm
Temperature Frequency Stability	st	-40°C to +85°C, ref. to 25°C			±30	ppm
Voltage Control Range	V <sub>c</sub>		0	1.65	3.3	V
V <sub>c</sub> Input Impedance	Z <sub>in</sub>	V <sub>cc</sub> = 3.3V, 0 ≤ V <sub>C</sub> ≤ V <sub>cc</sub>	100	500		kΩ
Pull Range	Pr	V <sub>C</sub> = 0V	-300		-100	ppm
		V <sub>C</sub> = 3.3V	100		300	
V <sub>c</sub> Linearity	V <sub>c lin</sub>	Positive slope			±10	%
Start-Up Time	t <sub>start</sub>	T <sub>a</sub> =25°C			10	ms
Aging	F-ag	First year			3	ppm
Operating Temperature	T <sub>a</sub>		-40		85	°C
Storage Temperature	T <sub>(stg)</sub>	Absolute max	-40		105	°C
Maximum Voltage	V <sub>cc(abs)</sub>				5.0	V
Moisture Sensitivity Level	MSL	JEDEC J-STD-2	1			
Termination; Finish			FR5, Nickel Silver, Au plating contacts			
ESD Sensitivity	HBM	Human body model JESD22-A114		3		kV

## V8F-J-155.520

### OUTPUT CHARACTERISTICS

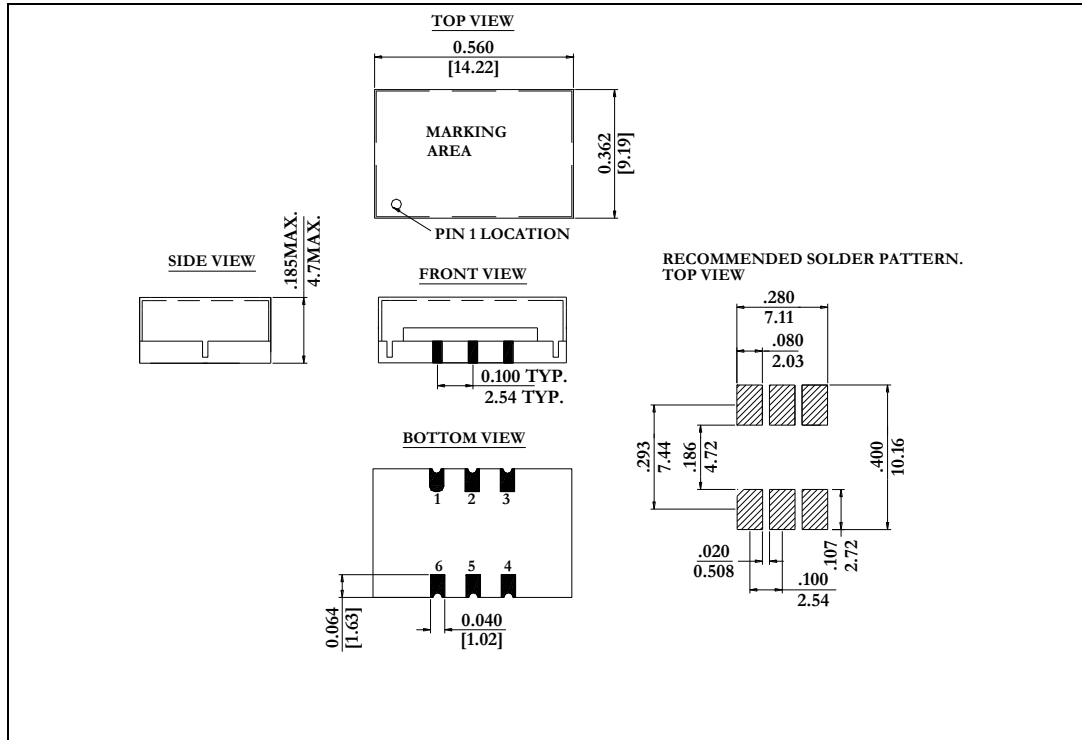
LVPECL	PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
				Min	Typ.	Max	
	Output levels	V <sub>OH</sub>	Output Termination 50Ω to V <sub>cc</sub> -2.0V, 3.3V ±5%	2.275			V
		V <sub>OL</sub>				1.68	V
	Rise/Fall time	T <sub>r</sub> /T <sub>f</sub>	20% to 80%			800	ps
	Duty Cycle	D <sub>CY%</sub>	-	40		60	%
	Output Load	O <sub>CL</sub>	to V <sub>cc</sub> -2.0V		50		Ω
	Enable Function	Enable Low	Pin 2: High, Output Disable				
			Pin 2: Low (High Impedance) or Open, Output Enable				

### PHASE NOISE & JITTER TABLE

PARAMETER	SYMBOL	CONDITION	VALUE			UNIT
			Min	Typ	Max	
SSB Phase noise	Σ(Δf)	Δf=10Hz			-65	dBc/Hz
		Δf=100Hz			-100	
		Δf=1kHz			-120	
		Δf=10kHz*			-135	
		Δf=100kHz*			-140	
RMS Phase Jitter	1φ	* From: 500Hz – 13MHz			0.5	pS

## V8F-J-155.520

### MECHANICAL DIMENSIONS AND PIN FUNCTIONING



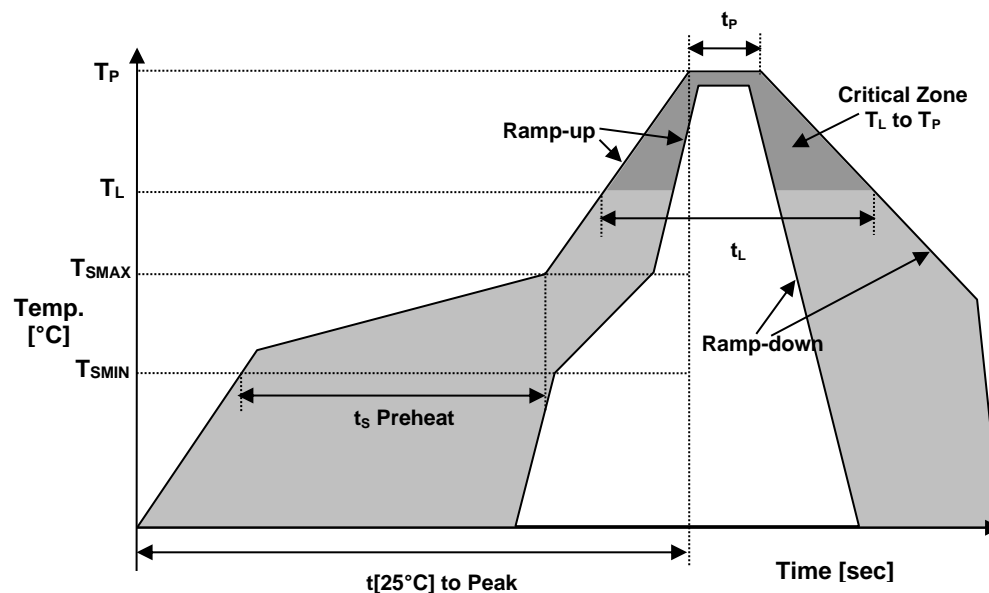
PIN	SYMBOL	FUNCTION
1	Vc	Control Voltage
2	E/D	Enable/Disable
3	GND	Case; Electrical Ground
4	Q	Output
5	/Q	Complementary Output
6	Vcc	Supply Voltage

■ **Marking:**

V8F-J  
100.000  
• D/C

## V8F-J-155.520

### REFLOW PROFILE



#### Recommended Solder Reflow Profile

Temperature Min Preheat	T <sub>SMIN</sub>	150°C
Temperature Max Preheat	T <sub>SMAX</sub>	175°C
Time (T <sub>SMIN</sub> to T <sub>SMAX</sub> )	t <sub>s</sub>	60-180 sec.
Temperature	T <sub>L</sub>	217°C
Peak Temperature	T <sub>P</sub>	260°C
Ramp-up rate	R <sub>UP</sub>	3°C/sec max.
Ramp-down rate	R <sub>DOWN</sub>	6°C/sec max.
Time within 5°C of Peak Temperature	t <sub>P</sub>	10 sec max.
Time t[25°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t <sub>L</sub>	60-150 sec.

#### APPROVALS

Eng. approval, date: CP May 13, 2020

Created by, date: AR May 13, 2020

Revision: A

