

**Absolute Maximum Ratings**

Parameter	Value
Supply Voltage V_{CC} / V_{CCIN}	30V
Input Voltage Level V_{IN}	-5V to $V_{CCIN} + 0.3V$
All Other Pins	-0.3V to $(V_{CC}, V_{CCIN}) + 0.3V$
Power Dissipation $T_{AMBIENT} \leq 25C$ $T_{case} \leq 25C$	2W 100W
Storage Temperature	-40°C to 150°C
Soldering Lead Temperature (10 seconds maximum)	300°C

The IXRFD630 is the next generation of IXYSRF drivers and is intended to be a direct, drop-in replacement for the DEIC420.

Parameter	Value
Maximum Junction Temperature	150°C
Operating Temperature Range	-40°C to 85°C
Thermal Impedance (Junction To Case) θ_{JC}	0.25°C/W

Electrical Characteristics

Unless otherwise noted, $T_A = 25^\circ C$, $8V < V_{CC} = V_{CCIN} < 30V$.

All voltage measurements with respect to DGND. IXRFD615 configured as described in *Test Conditions*.

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
V_{IH}	High input voltage		3	3.5		V
V_{IL}	Low input voltage				0.8	V
V_{IN}	Input voltage range		-5		$V_{CC} + 0.3$	V
I_{IN}	Input current	$0V \leq V_{IN} \leq V_{CC}, V_{CCIN}$	-10		10	μA
V_{OH}	High output voltage			$V_{CCIN} - 0.025$		V
V_{OL}	Low output voltage				0.025	V
R_{OH}	Output resistance @ Output High	$I_{OUT} = 10mA, V_{CC} = 15V$		0.3		Ω
R_{OL}	Output resistance @ Output Low	$I_{OUT} = 10mA, V_{CC} = 15V$		0.3		Ω
I_{PEAK}	Peak output current	$V_{CC}, V_{CCIN} = 15V$		30		A
I_{DC}	Continuous output current			2.5		A
f_{MAX}	Maximum frequency	$C_L = 2nF, V_{CC}, V_{CCIN} = 15V$			45	MHZ
t_R	Rise time	$C_L = 1nF, V_{CC}, V_{CCIN} = 15V, V_{OH} = 2V$ to 12V		3		ns
		$C_L = 2nF, V_{CC}, V_{CCIN} = 15V, V_{OH} = 2V$ to 12V		4		ns
t_F	Fall time	$C_L = 1nF, V_{CC}, V_{CCIN} = 15V, V_{OH} = 12V$ to 2V		3		ns
		$C_L = 2nF, V_{CC}, V_{CCIN} = 15V, V_{OH} = 12V$ to 2V		3.5		ns
t_{ONDLY}	On-time propagation delay	$C_L = 2nF, V_{CC} = 15V$		21		ns
t_{OFFDLY}	Off-time propagation delay	$C_L = 2nF, V_{CC} = 15V$		23		ns
PW_{min}	Minimum pulse width	FWHM $C_L = 1nF, V_{CC}, V_{CCIN} = 15V$		8		ns
V_{CC}, V_{CCIN}	Power supply voltage		8	15	30	V
I_{CC}	Power supply current	$V_{CC} = 15V, V_{IN} = 0V$		0	10	μA
		$V_{CC} = 15V, V_{IN} = 3.5V$		1	3	mA
		$V_{CC} = 15V, V_{IN} = V_{CC}$		0	10	μA

