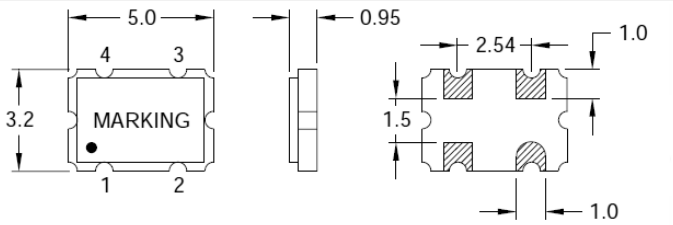
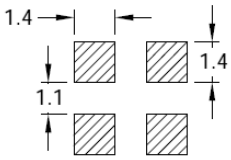
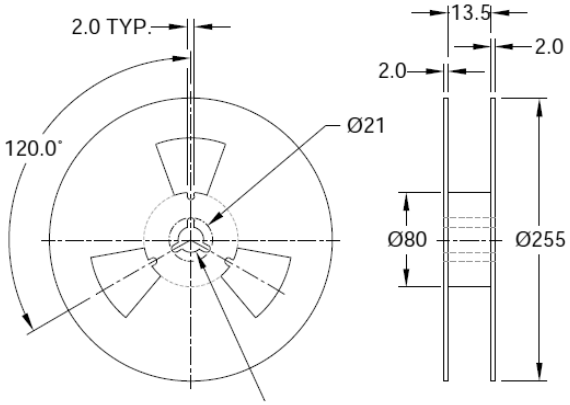


PAD CONNECTIONS
PAD 1: E/D
PAD 2: GROUND
PAD 3: OUT
PAD 4: V_{DD}

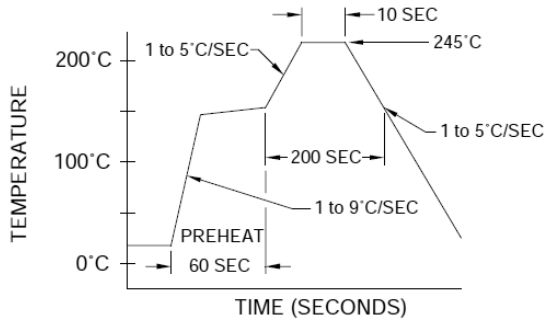


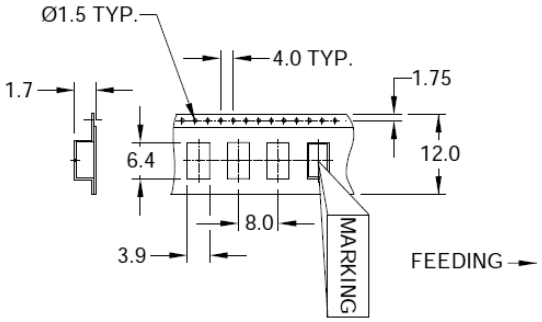
SUGGESTED PAD LAYOUT
TOP VIEW

CARRIER TAPE AND REEL DIMENSIONS



INFRARED RAYS REFLOW





SPECIFICATIONS

Series Number	QSMO-4610__ (1)	QSMO-4630__ (1)	QSMO-4650__ (1)	QSMO-4660__ (1)
Frequency Range	1.8 to 170 MHz	1.0 to 170 MHz	1.8 to 160 MHz	
Overall Frequency Stability (Max) (1)	A = ±25ppm 0° to 70° B = ±50ppm 0° to 70° C = ±100ppm 0° to 70° D = ±10ppm 0° to 70°		E = ±25ppm -40° to 85° F = ±50ppm -40° to 85° G = ±100ppm -40° to 85° H = ±20ppm -40° to 85°	
Storage Temperature Range	-50°C to +125°C			
Supply Voltage	+3.3V ±10%	+5.0V ±10%	+1.8V ±5%	+2.5V ±5%
Supply Current (Max)	1.8 ~ 50 MHz 20mA >50 ~ 80 MHz 30mA >80 ~ 125 MHz 40mA >125 ~ 170 MHz 50mA	1.0 ~ 67 MHz 50mA >67 ~ 125 MHz 80mA >125 ~ 170 MHz 90mA	1.8 ~ 32 MHz 7mA >32.1 ~ 50 MHz 15mA >50 ~ 160 MHz 28mA	1.8 ~ 32 MHz 10mA >32 ~ 80 MHz 18mA >80 ~ 125 MHz 28mA >125 ~ 160 MHz 38mA
Standby Current At '0' Level at #1	10µA			
Output Voltage "0" Level (Max) "1" Level (Min)	0.33V 2.97V	0.5V 4.5V	0.36V 1.44V	0.25V 2.25V
Output Load (Max) TTL Load/CMOS Load	15pF			
Rise/Fall Times (Max) At 0.1V_{DD} ~ 0.9V_{DD} or 0.2V_{DD} ~ 0.8V_{DD}	6ns (1.8 ~ 80 MHz) 4ns (>80 ~ 125 MHz) 3ns (>125 ~ 160 MHz)	5ns (<80 MHz) 4ns (≥80 MHz)	5ns (1.8 ~ 32.1 MHz) 3.5ns (>32.1 ~ 50 MHz) 3ns (>50 ~ 125 MHz)	5ns (1.8 ~ 80 MHz) 4ns (>80 ~ 125 MHz) 3ns (>125 ~ 160 MHz)
Symmetry (Max) At 0.5V_{DD} or 1.4V	45% / 55% (≤50 MHz) 40% / 60% (>50 MHz)	40% / 60%	40% / 60%	45% / 55% (≤50 MHz) 40% / 60% (>50 MHz)
Start-Up Time (Max)	5ms (≤32 MHz) 10ms (>32 MHz)	10ms	10ms	5ms (≤32 MHz) 10ms (>32 MHz)
Tri-State Control Open #1 ≥2.2V or 0.7V_{DD} #1 ≤0.8V or 0.3V_{DD}	#3 Active #3 Active #3 High Z			

Note (1): Customer to add 'A' to 'D' or 'E' to 'H' for Overall Frequency Stability.

Note: The above specifications are typical only. Please contact our Sales Department for specific requirements.

RoHS compliant REACH

Ref.No. 1012-0328-00-01 28 October 2020 All dimensions are in mm and within manufacturing tolerances. Specifications subject to change without notice